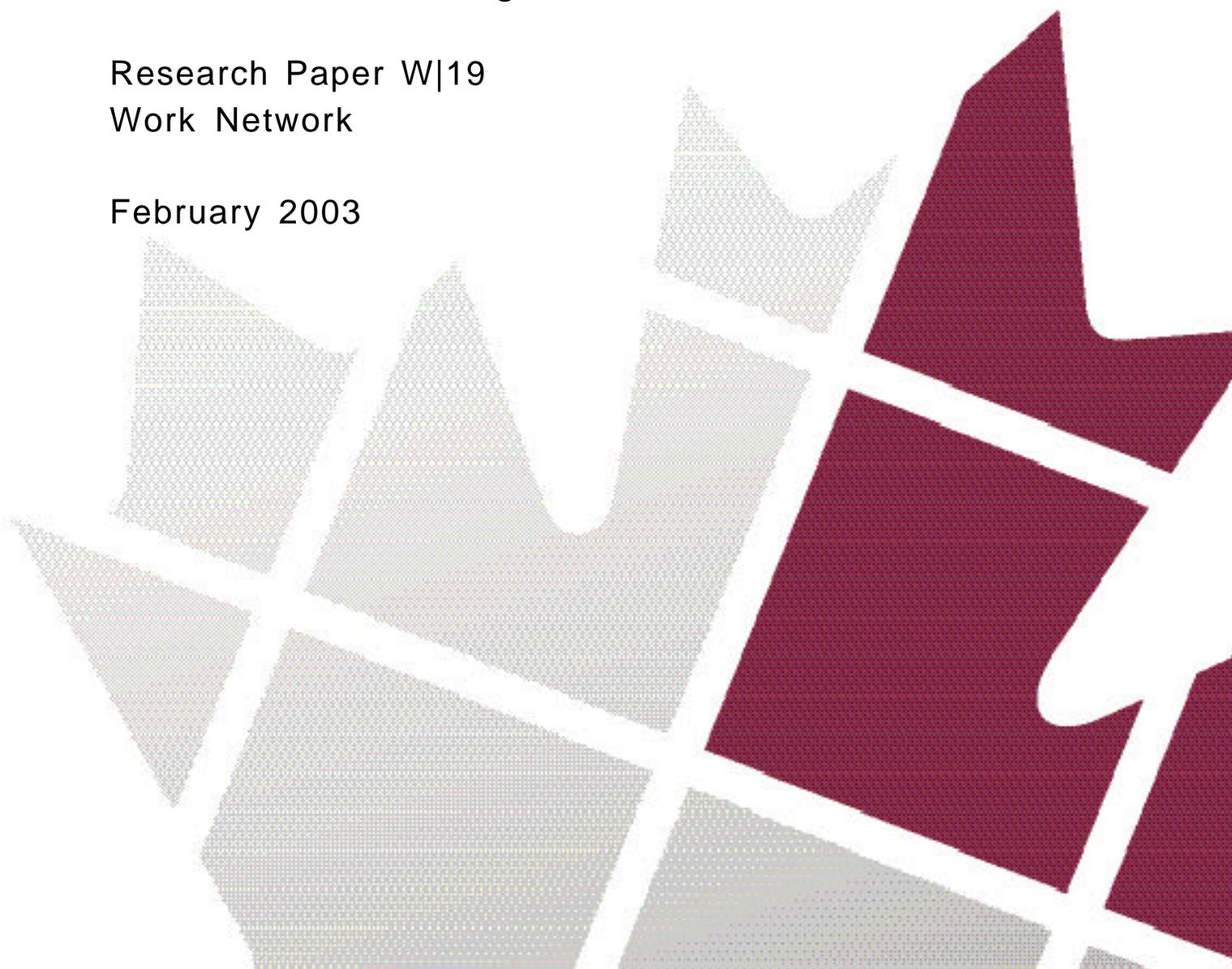


Men's and Women's Quality of Work in the New Canadian Economy

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Foreword

Canadians are familiar with the notion of a ‘gender gap’ in labour markets and workplaces. We know that, historically, women were paid much less than men for the same work, or for work with similar demands and skill requirements. We also know that women have had difficulty gaining access to management and executive-level jobs. Governments in Canada have paid attention to these gaps, and some have developed policies such as pay equity, to help close the earnings gap, and employment equity, to help women achieve fair access to employment opportunities.

These are very important issues and policy initiatives. But the story of how men and women experience work goes beyond earnings differences and occupational segregation. This study breaks new ground by exploring what men and women value in a job and how they experience the quality of their work life. In particular, it looks at work environments and work relationships – key aspects of employment that shape the lives of Canadians on a daily basis.

These are important questions for employers, employees, and governments. Previous research by CPRN has shown that job quality not only affects worker morale, it also affects absenteeism, turnover, and, therefore, productivity. This report shows that there are some important gender differences regarding what is seen as a desirable job. These differences are greatest among women and men with higher levels of education. The ‘new’ economy of knowledge work is, in this sense, a gendered economy.

I wish to thank the three authors: Karen Hughes and Graham Lowe (both in the Department of Sociology at the University of Alberta) and Grant Schellenberg (Director of the CPRN Work Network in 2002) for the analysis they have given us. I also want to say thanks to Bell Canada, Home Depot Canada, and Scotiabank for their investment in the study. The researchers benefited from their input to the analysis, and we hope that employers across Canada will learn from the results.

Certainly, employers who wish to attract and retain scarce knowledge workers need to understand what job characteristics matter to these workers, and they need to design their workplaces in a way that is sensitive to the different needs and values of women and men. It is our hope that this report will contribute to the effort to provide quality jobs for all.

Judith Maxwell
February 2003

Executive Summary

Despite much debate and commentary on the emerging knowledge economy in Canada and other industrialized countries, there has been little in-depth analysis of how gender issues are playing out in the process of economic and workplace change. Women's experiences on the job are usually examined using a limited range of measures, and scant attention has been paid to the expectations that women and men bring to the workplace. The purpose of this report is to provide new evidence on what women and men want in a job, and how they are experiencing the transition to a knowledge-based economy.

On many measures, there is evidence of growing convergence in the labour market characteristics of Canadian women and men. Whether we consider labour force participation rates, earnings, access to knowledge occupations, or union representation, women and men's working experiences seem to be becoming more alike. But there are important exceptions to this, most notably the persistent segregation of women and men into different occupations and the much higher rates of part-time work for women. Overall, convergence is most evident amongst highly educated workers – especially those with university degrees.

However such convergence is only half the story. Our research shows that, in many respects, women and men have different expectations and assessments of their jobs, and that these differences are most apparent among women and men with higher levels of education. These findings add an important element to the discussion of how the working lives of women and men are being transformed in the knowledge economy.

Before considering these gender differences in job expectations and assessments, it is important to highlight one aspect of work that is highly valued by both women and men, regardless of education – the desire for interesting work.

Most women and men express a desire for interesting work and a sense of accomplishment. People want to feel engaged in what they are doing. This is evidenced by the fact that about 70 to 75 percent of women and men across education levels rank interesting work as a very important job characteristic. However, one in seven employees (14 percent) says that their job is less interesting and engaging than they would like, with employees with high school or less more likely to report this type of 'job quality deficit' than employees with a university degree. This 'job quality deficit' has significant consequences for employers. For example, fully one-half of workers with such a deficit looked for a job with another employer in the previous year. Workplace strategies, such as job rotation or task diversity, are one way to address the negative aspects of repetitive or monotonous work.

Other expectations of job quality vary more widely across levels of educational attainment, and it is useful to segment the labour force into two groups – individuals with post-secondary education and those without.

Expectations and Job Characteristics of People without Post-secondary Education

Women and men with high school or less place a greater priority on job security, pay and benefits than individuals with higher levels of educational attainment (especially university degrees). For example, men with high school or less are almost twice as likely as men with university degrees to rate job security as a ‘very important’ job characteristic. Clearly, they are uncertain about their prospects for re-employment in the wake of a job loss, and are sensitive to issues of pay and benefits given the relatively small pool of good jobs available to them. For many employees with high school or less, their job falls short of their expectations on pay, benefits and security. Indeed, one-third of men and almost 40 percent of women have a ‘job quality deficit’ in this area.

For employers who rely on a low-wage, high turnover employment strategy, such dissatisfaction is unlikely to be a concern. But for those who rely on high school graduates for at least a portion of their core workforce, pay, benefits and security are important considerations in recruitment and retention strategies. These bread and butter issues are also closely associated with the willingness of employees to join a union.

Employees with high school or less – especially women – also place a high value on communication and collegial relations in the workplace. For example, 82 percent of female employees and 71 percent of males with high school or less say that good communication in the workplace is ‘very important’ to them. However, for about 15 percent of women and men, the quality of communication in their workplace falls short of their expectations. Again, this has important implications for employers, as the vast majority of employees with a job quality deficit in this area report that morale in their workplace is low. One obvious implication is that employers struggling to improve morale in the workplace would be well advised to improve channels of communication.

Employees with high school or less also experience ‘job quality deficits’ in other key areas. For example, about 35 to 40 percent of these employees report that their jobs provide less flexibility to balance work and family than they would prefer, and just over 25 percent report that the level of trust and commitment they experience in the workplace is less than they would prefer. Among men and women with high school or less, gender differences on these measures are negligible. For employers, these job quality deficits have significant consequences, as they are positively correlated with intentions of job turnover, willingness to join a union, low morale and absenteeism.

Expectations and Job Characteristics of People with Post-secondary Education

While the labour market characteristics of female and male university graduates are converging on many measures, our evidence shows that job expectations and assessments differ most within this educational category. In short, the new economy looks very different to female and male knowledge workers.

Among university graduates, female employees are far more likely than their male counterparts to place a high value on respect, commitment, communications and workplace relations. The

shares of female graduates ranking these job characteristics as ‘very important’ are about 18 percentage points higher than male graduates. The importance that women attach to commitment and workplace relations suggests a desire for stable employment relationships, which calls into question the notion of employees as foot-loose ‘free agents’. In contrast, university educated men seem to place far less value on these softer aspects of work life, and may be the one group that fits the ‘free agent’ image of a knowledge worker.

While university-educated women have high expectations regarding people-supportive workplace practices, these expectations are not being met. For example, one-third of female graduates have a job quality deficit in the area of work-family balance and flexibility, one-quarter have a job quality deficits in both commitment and respect, and pay, benefits and security, while one-in-seven have a job quality deficit in the area of communication. These deficit rates are higher than those reported by men, indicating that female knowledge workers are more likely to experience frustration in finding employment that meets their expectations.

Impacts of Information Technologies

Information technologies are an important element in the transformation of Canadian workplaces. Over one-half of employed Canadians are now moderate or high intensity users of computers in the workplace. These people work in a fairly wide range of occupational and educational categories – about one-third of high intensity computer users are located in professional occupations, while one-fifth are in clerical jobs. Women account for 42 percent of high-intensity computer users and 51 percent of moderate intensity users. About half of high intensity computer users have a university degree, and one quarter have high school or less. High intensity use of computers in the workplace brings with it both positive and negative outcomes, with women expressing most concerns about the negatives.

On the positive side, high technology use is associated with interesting work. It appears to enhance the interest and challenge of work for both women and men, and to be associated with greater utilization of employees’ skills on the job. Intensive use of technology is generally viewed as having a neutral or positive effect on job security for men but less so for women.

On the negative side, high intensity computer use is linked to longer work hours, more intensified job demands, and spillover of work into the home. Bearing in mind that many Canadians already experience high levels of work-family conflict and the associated organizational and economic costs, it would seem prudent for employers to ensure that new technologies are not adding to such problems. The challenge is to use technology to reduce workloads and increase flexibility and choice in their work lives.

Overall, our analysis shows striking changes in the labour market role of educated women, but little change in the role of women with high school or less. A more technology-driven, knowledge-based economy brings new opportunities for women in managerial and professional occupations, but we see the same concentrations of women with high school or less in the traditional sales, service, and clerical occupations. Thus, the growth of knowledge work and the information technology revolution have been levelers for some, but not for all.

But this is only half the story. Work experiences in knowledge sectors of the economy look very different to women than to men. Most notably, men are more likely than women to be intensive IT users, and men also come out ahead when it comes to positive benefits of IT on job security. Thus, the new economy appears so far to be a gendered economy. Women are not excluded, but their experiences are less positive than for men.

What is important for employers to consider in the years ahead, as skill shortages emerge, is that the key to retention and recruitment often lies in the quality of the work experience. In this context, differences in the expectations and values of women and men are an important consideration.

Overall, job quality has a direct and significant impact on job turnover, morale, and willingness to join a unit. Understanding and responding to the expectations of employees will therefore make a real difference to the bottom line in the 21st century labour market.

Résumé

En dépit du vaste débat et de nombreux commentaires que suscite l'émergence d'une économie du savoir au Canada et dans d'autres pays industrialisés, il n'existe à peu près pas d'analyse approfondie de la façon dont la problématique hommes-femmes exerce une influence sur le processus d'évolution économique et de changement en milieu de travail. Les expériences vécues par les femmes dans leur emploi sont généralement analysées en utilisant un éventail limité de mesures, tandis que les aspirations que les hommes et les femmes nourrissent à l'égard de leur milieu de travail n'ont reçu que très peu d'attention. Cette étude a pour but de fournir de nouvelles indications sur ce que les hommes et les femmes attendent d'un emploi et sur la façon dont ils font la transition vers une économie fondée sur le savoir.

En s'appuyant sur plusieurs indicateurs, il y a lieu de croire qu'il se produit une convergence croissante au niveau des caractéristiques sur le marché du travail des hommes et des femmes au Canada. Qu'il s'agisse des taux d'activité, des gains, de l'accès aux emplois à haute intensité de savoir ou de représentation syndicale, l'expérience vécue au travail par les hommes et les femmes semble devenir de plus en plus similaire. Mais il existe d'importantes exceptions à cette observation, notamment en ce qui concerne la ségrégation des hommes et des femmes dans différentes professions et les taux de travail à temps partiel beaucoup plus élevés chez les femmes. Dans l'ensemble, la convergence est des plus manifeste parmi les travailleurs hautement scolarisés – notamment ceux qui possèdent des diplômes universitaires.

Mais cette convergence ne fournit qu'une explication partielle de la situation. Nos recherches indiquent qu'à bien des égards, les hommes et les femmes possèdent des aspirations différentes à l'égard de leur travail et qu'ils font des évaluations différentes de leur emploi; ces divergences sont des plus apparentes parmi les femmes et les hommes dont les niveaux de scolarité sont plus élevés. Ces constatations ajoutent un élément important à l'analyse de la façon dont les vies professionnelles des femmes et des hommes sont en voie d'être transformées par l'économie du savoir.

Avant de considérer ces différences entre les hommes et les femmes sur le plan de leurs aspirations et de leurs évaluations professionnelles, il importe de mettre en relief un aspect du travail qui est hautement apprécié tant par les femmes que par les hommes, sans égard au niveau de scolarité – la volonté de faire un travail intéressant.

La plupart des hommes et des femmes aspirent à faire un travail intéressant et à éprouver un sentiment d'accomplissement. Les gens veulent se sentir mobilisés par ce qu'ils font. Cette observation est appuyée par le fait que de 70 à 75 pour cent des femmes et des hommes à tous les niveaux de scolarité classent un travail intéressant comme une caractéristique très importante d'un emploi. Toutefois, un employé sur sept (14 pour cent) avoue que son emploi est moins intéressant et inspirant qu'il le souhaiterait; ce « déficit en matière de qualité d'emploi » est susceptible d'être évoqué plus souvent par les employés ayant une scolarité de niveau secondaire ou moindre que par ceux qui possèdent un diplôme universitaire. Ce genre de « déficit » a des répercussions considérables pour les employeurs. Ainsi, au moins la moitié des travailleurs touchés par un tel déficit ont indiqué qu'ils avaient été à la recherche d'un emploi auprès d'un autre employeur au cours de l'année précédente. Des stratégies en milieu de travail, comme la

rotation des emplois ou la diversité des tâches, sont une façon de s'attaquer aux aspects négatifs de tâches répétitives ou monotones.

D'autres aspirations sur le plan de la qualité des emplois varient plus fortement entre les niveaux de scolarité; il est donc utile de répartir la population active en deux groupes : les personnes qui possèdent une scolarité postsecondaire et celles qui n'en ont pas.

Aspirations et caractéristiques en matière d'emploi des gens qui ne possèdent pas une scolarité postsecondaire

Les femmes et les hommes ayant une scolarité de niveau secondaire ou moindre accordent une priorité plus élevée à la sécurité d'emploi, à la rémunération et aux avantages sociaux que ne le font les personnes ayant des niveaux de scolarité plus élevés (notamment des diplômes universitaires). Par exemple, les hommes ayant une scolarité de niveau secondaire ou moindre sont presque deux fois plus susceptibles que les hommes possédant un diplôme universitaire de considérer la sécurité d'emploi comme une caractéristique « très importante » d'un emploi. Manifestement, ils sont incertains concernant leurs perspectives de réembauche à la suite de la perte d'un emploi et ils sont sensibles aux questions de rémunération et d'avantages sociaux à cause du nombre limité d'emplois qui leur sont accessibles. Pour plusieurs employés avec une scolarité de niveau secondaire ou moindre, leur emploi ne comble pas leurs aspirations sur le plan de la rémunération, des avantages sociaux et de la sécurité d'emploi. Dans les faits, un tiers des hommes et 40 pour cent des femmes ont un « déficit en matière de qualité d'emploi » dans ce domaine.

Pour des employeurs qui s'appuient sur une stratégie d'emploi à faible salaire et à roulement élevé, cette insatisfaction ne sera probablement pas une source de préoccupation. Mais, pour ceux qui comptent sur des diplômés du secondaire pour au moins une partie de leur effectif de base, la rémunération, les avantages sociaux et la sécurité d'emploi sont des considérations importantes de leurs stratégies de recrutement et de conservation des travailleurs. Ces questions fondamentales sont aussi étroitement reliées à l'empressement des employés à se joindre à un syndicat.

Les employés ayant une scolarité de niveau secondaire ou moindre – surtout les femmes – attachent aussi une valeur élevée aux communications et aux relations collégiales en milieu de travail. Ainsi, 82 pour cent des femmes et 71 pour cent des hommes au travail qui ont une scolarité de niveau secondaire ou moindre indiquent que de bonnes communications dans le milieu de travail sont très importantes pour eux. Toutefois, pour environ 15 pour cent des hommes et des femmes, la qualité des communications dans leur milieu de travail est inférieure à leurs attentes. Encore une fois, cette constatation a des répercussions importantes pour les employeurs, puisque la vaste majorité des employés qui ont un déficit en matière de qualité de leur emploi dans ce domaine déclarent que le moral est bas dans leur milieu de travail. Il est donc manifeste que les employeurs qui cherchent à améliorer la motivation de leurs employés seraient bien avisés de s'employer à améliorer les canaux de communications.

Les employés ayant une scolarité de niveau secondaire ou moindre accusent aussi des « déficits en matière de qualité d'emploi » dans d'autres domaines importants. Par exemple, de 35 à 40

pour cent environ de ces employés indiquent que leur emploi leur offre moins de flexibilité pour concilier le travail et la famille qu'ils ne le souhaiteraient, et un peu plus de 25 pour cent rapportent que le niveau de confiance et d'engagement qu'ils éprouvent dans le milieu de travail est inférieur à ce qu'ils préféreraient. Parmi les hommes et les femmes qui ont une scolarité de niveau secondaire ou moindre, les différences entre les sexes sur le plan de ces mesures sont minimales. Pour les employeurs, ces déficits en matière de qualité des emplois ont des conséquences sérieuses, puisqu'ils sont corrélés positivement avec les intentions de changer d'emploi, la volonté de se joindre à un syndicat, une faible motivation et l'absentéisme.

Aspirations et caractéristiques en matière d'emploi des gens qui possèdent une scolarité postsecondaire

Les caractéristiques sur le marché du travail des hommes et des femmes qui possèdent un diplôme universitaire convergent selon plusieurs indicateurs, mais nos constatations indiquent que les aspirations professionnelles et l'évaluation des emplois diffèrent grandement à l'intérieur de ce niveau de scolarité. En bref, la nouvelle économie est perçue très différemment par les travailleurs du savoir selon qu'il s'agit d'un homme ou d'une femme.

Parmi les diplômés universitaires, les femmes au travail sont beaucoup plus susceptibles que leurs collègues de sexe masculin d'attacher une valeur élevée au respect, à l'engagement, aux communications et aux relations en milieu de travail. Les proportions des femmes diplômées qui classifient ces caractéristiques d'un emploi comme « très importantes » sont d'environ 18 points de pourcentage plus élevées que celles des hommes diplômés. L'importance que les femmes accordent à l'engagement et aux relations en milieu de travail fait état d'une volonté de maintenir des relations en matière d'emploi stables, ce qui remet en question la notion d'employées qui se comportent comme des « agents libres » et mobiles. Par contre, les hommes qui possèdent une scolarité universitaire semblent attacher beaucoup moins de valeur à ces aspects plus périphériques de la vie professionnelle, et ils forment peut-être l'un des groupes à qui s'applique l'image d'« agents libres » que l'on associe aux travailleurs du savoir.

Les femmes qui possèdent une scolarité universitaire ont de fortes aspirations en ce qui concerne les mesures de soutien en milieu de travail orientées vers les gens, mais ces attentes ne sont pas comblées. Par exemple, un tiers des femmes diplômées ont un déficit en matière de qualité des emplois dans le domaine de la flexibilité et de la conciliation du travail et de la famille, un quart accusent des déficits de qualité des emplois dans le domaine tant de l'engagement et du respect que de la rémunération, des avantages sociaux et de la sécurité d'emploi, tandis qu'une femme sur sept fait état d'un déficit de qualité des emplois dans le domaine des communications. Ces taux de déficit sont plus élevés que ceux déclarés par les hommes, ce qui indique que les travailleuses du savoir sont davantage susceptibles d'éprouver des frustrations dans leurs démarches en vue de trouver des emplois qui comblent leurs aspirations.

Incidences des technologies de l'information

Les technologies de l'information sont un élément important de la transformation des milieux de travail au pays. Plus de la moitié des Canadiens au travail font une utilisation moyenne ou élevée de l'ordinateur dans leur milieu de travail. Ces gens font partie d'un éventail assez large de

catégories professionnelles et éducationnelles – environ un tiers de ceux qui font une utilisation intense de l'ordinateur occupent des emplois spécialisés, tandis qu'un cinquième d'entre eux occupent des postes de commis. Les femmes représentent 42 pour cent des personnes qui font une utilisation intense de l'ordinateur au travail et 51 pour cent de celles qui en font une utilisation modérée. Environ la moitié des gens qui utilisent l'ordinateur de façon intense possèdent un diplôme universitaire, tandis qu'un quart d'entre eux ont une scolarité de niveau secondaire ou moindre. Une forte utilisation de l'ordinateur dans le milieu de travail s'accompagne de résultats positifs et négatifs, et ce sont les femmes qui expriment le plus de préoccupations concernant les aspects négatifs.

Du côté positif, une utilisation intensive de la technologie est associée à un travail intéressant. Elle semble avoir pour effet de stimuler l'intérêt et les défis que suscite le travail tant pour les femmes que pour les hommes, et aller de pair avec une meilleure utilisation des compétences des employés dans leur travail. Une utilisation intensive de la technologie est généralement perçue comme ayant un effet neutre ou positif sur la sécurité d'emploi pour les hommes, mais moins pour les femmes.

Du côté négatif, une intensité élevée d'utilisation de l'ordinateur est associée à des heures de travail plus longues, à des tâches professionnelles plus exigeantes et à des retombées sous forme de poursuite du travail au foyer. Compte tenu du fait que de nombreux Canadiens éprouvent déjà de nombreuses difficultés à concilier le travail et la famille et à faire face aux coûts économiques et organisationnels qui s'y rattachent, les employeurs seraient bien avisés de s'assurer que les nouvelles technologies ne contribuent pas à aggraver ces problèmes. Le défi consiste à utiliser la technologie pour réduire les charges de travail et améliorer la flexibilité et les choix des employés dans leur vie professionnelle.

Dans l'ensemble, notre analyse fait état de changements saisissants dans le rôle exercé par les femmes hautement scolarisées sur le marché du travail, mais de peu de changements dans le cas des femmes qui possèdent une scolarité de niveau secondaire ou moindre. Une économie davantage axée sur la technologie et le savoir contribue à ouvrir de nouveaux débouchés pour les femmes dans des postes de gestionnaire et des emplois spécialisés, mais nous pouvons observer les mêmes concentrations de femmes ayant une scolarité de niveau secondaire ou moindre dans les postes traditionnels de la vente, des services et des emplois de bureau. Donc, la croissance de l'économie du savoir et la révolution des technologies de l'information ont permis à certaines femmes, mais pas à l'ensemble de celles-ci, de faire du rattrapage.

Mais il ne s'agit que d'une explication partielle de la situation. Les expériences professionnelles vécues par les femmes dans les divers secteurs de l'économie du savoir semblent être très différentes de celles des hommes. Plus précisément, les hommes sont plus susceptibles que les femmes d'être des utilisateurs intensifs des technologies de l'information, et les hommes devancent aussi les femmes lorsqu'on considère les avantages positifs des technologies de l'information sur la sécurité d'emploi. Donc, la nouvelle économie semble jusqu'ici être porteuse d'une certaine inégalité entre les sexes. Les femmes ne sont pas exclues, mais leurs expériences semblent être moins positives que celles des hommes.

Dans les années à venir, avec l'émergence de pénuries de compétences, il sera important pour les employeurs de considérer que la clé pour le recrutement et la conservation des effectifs réside souvent dans la qualité de l'expérience professionnelle. Dans ce contexte, les différences entre les femmes et les hommes au chapitre des aspirations et des valeurs sont des facteurs importants à considérer.

Dans l'ensemble, la qualité des emplois a une incidence directe et significative sur le roulement des travailleurs, la motivation et l'empressement à se joindre à une unité. La compréhension et la prise en considération des aspirations des employés contribueront véritablement à améliorer la rentabilité des entreprises dans le contexte de l'évolution de la situation du marché du travail au XXI^e siècle.

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Introduction

The 'gender gap' in employment is an enduring feature of all industrialized economies. Men typically enjoy better incomes and career prospects than women. In recent years, however, the gender gap has narrowed or closed on a number of fronts. The male-female wage gap has slowly narrowed. Employment patterns of younger women closely mirror the long-standing male pattern of full-time and continuous work. Women have made significant gains in prestigious professions such as law and medicine and in middle management. More women than men graduate from Canada's universities, and women are more frequent users of workplace computer technology than are men.

These trends in male and female employment coincide with the late-20th century emergence of Canada's 'new' economy. While the notion of a 'new' Canadian economy is being actively debated, most commentators agree that economies are being fundamentally reshaped (Atkinson and Court, 1998; Betcherman, McMullen and Davidman, 1998; Betcherman and Lowe, 1997; Beck, 1995; Gera and Massé, 1996; Menzies, 1998). The economy has become more knowledge-intensive and based on information-technology. Human capital is widely recognized as the key to innovation and competitiveness. Employment policies have become more market based, shifting responsibility from the state to the individual. All of these trends have taken root within an aging workforce, as the wave of baby-boomer retirements later this decade prompts some employers to address quality of work issues as part of their recruitment and retention strategies.

Gender issues have not been prominent in debates over the new economy. But understanding whether, and how, the gender gap is changing clearly is important for designing effective approaches to human resource management, skill development and innovation. In *Gender Mainstreaming: Competitiveness and Growth* the OECD (2000) urges countries to pay greater attention to gender in discussions of competitiveness and growth, and to develop more comprehensive, gender-based information for effective policy-making. In Canada, the federal government has also recognized the importance of gender-based analysis to economic and labour market policy (Status of Women, 1995; 2000). Media reports and academic research also highlight gender issues, such as work-family conflict, the 'glass ceiling', and women's exodus from high status occupations. For example, recent studies estimate that absenteeism due to work-family conflict costs Canadian firms an estimated \$3 billion a year, underlining the importance of gender issues to employers and policy makers alike (Duxbury, Higgins, and Johnson, 1999; Duxbury and Higgins, 2001).

Against the backdrop of these trends and debates about the changing nature of work in the new economy, we address these questions:

- To what extent are there differences in what women and men value in a job?
- What are the main differences in how women and men experience their quality of work life?
- In a knowledge-based economy, has education, not gender, become the determining factor in who gets good quality jobs? To what extent are well-educated knowledge workers different from other workers in terms of their work values and quality of work life?
- Given that information technology is a defining feature of the 'new' economy, how does it affect the quality of jobs, and what are the key gender differences in this regard?

- Finally, what are the practical implications of these trends for policy makers and human resource management practice?

What we find is subtle yet striking. A more technology-driven, knowledge-based economy brings new opportunities, as well as new pressures and barriers. As in previous economic eras, today's economy is segmented along gender and education lines. However, the growth of knowledge work and the information technology revolution have been levelers, at least for those individuals who can access the high end of the job market. Thus, while the gender gap is closing for the well educated, the labour market also is becoming more deeply divided along education lines.

But this is only half the story. Looking beyond the most visible indicators of labour market success, we find important gender differences in work experiences. So among knowledge workers, men and women have distinctive core work values and experiences. In other words, the knowledge sectors of economy look very different to women than to men. Compounding this, there are several distinctly gendered trends in the information technology (IT) revolution. Most notably, men are more likely than women to be intensive IT users, and men also come out ahead when it comes to positive benefits of IT on job security. To the extent that these trends persist, the new economy will be a gendered economy, albeit on different terms than in the old economy.

The report is organized as follows:

Section 1 briefly outlines competing ideas about gender and the new economy, focusing on debates over growing convergence and divergence in the labour market. It also examines current labour market trends, using traditional labour market indicators (e.g., income, occupation, non-standard work) to provide an overview of the situation of working women and men in Canada.

Section 2 goes beyond these traditional indicators, to examine what women and men want in the workplace. Drawing on the 2000 CPRN-Ekos Changing Employment Relationships Survey, we focus on the value women and men place on a range of job features, from pay and job security to respect and work/family balance.

Section 3 examines what women and men currently have in their jobs. Here we explore gender differences in the quality and experience of work (e.g., intrinsic rewards, job demands, communication, influence), shedding light on the less visible aspects of women's and men's work situations today.

Section 4 examines discrepancies between what workers want and what they have, focusing on differences and similarities between women and men. We also explore how discrepancies between actual and desired job features affect important individual and workplace outcomes, such as job satisfaction, turnover, and morale.

Section 5 focuses on gender differences in the use of information technology in workplaces, using data from Statistics Canada's *2000 General Social Survey*. We also document how computer-use (including e-mail and the Internet) affects skills, workload, stress, intrinsic rewards, and job security.

Section 6 concludes by drawing out the implications of our research findings for employers, employees and public policy.

Section 1: Gender and the ‘New Economy’

Despite ongoing debate over the notion of the new economy, many analysts agree that the Canadian economy has been significantly transformed in recent years. Whether due to the emergence of information technology, the growing importance of knowledge-based sectors, global trade and production, or shifting attitudes of employees and employers, it is clear that the nature of work in Canada has been fundamentally altered. Amidst all these changes, the growing importance of knowledge and skill stand out as hallmarks of the new economy. More than anything, what distinguishes today’s economy from earlier eras is that it is knowledge-based.

Commentators highlight both opportunities and challenges for workers in the midst of this transition (e.g., Beck, 1995; Drucker, 1999; Reich, 1991; 2001). In Canada, writers such as Nuala Beck, author of *Excelerate: Growing in the New Economy*, point to the growing demand for workers skilled in teamwork, communication, and computer literacy, and to the challenges faced by less educated workers in declining ‘old economy’ sectors. In the U.S., Robert Reich, author of *The Work of Nations* and *The Future of Success*, predicts a growing role for highly educated, creative, individuals who are adept at creating new products and services and identifying opportunities in new knowledge based sectors (e.g., ‘symbolic analysts’) and new ways of working in the ‘global web’ where short-term, project-based relationships replace more traditional forms of long-term employment.

Yet often these discussions are silent on gender. Knowledge workers are treated as an undifferentiated group.¹ Do women and men have the same opportunities in the new economy? Has the impact of economic and workplace restructuring on the quality of work life been different for women than for men? While there are no clear answers to such questions, commentators in Canada and other industrialized countries suggest two scenarios: *convergence* and *divergence*.

Convergence

Popular cultural images of successful career women, such as judges, doctors, and entrepreneurs present the first scenario. It emphasizes the gains made by women in recent decades and suggests that in a knowledge based economy the work patterns and outcomes of women and men will continue to converge – at least as measured by traditional labour market indicators. For example, the narrowing gaps in labour force participation and earnings are seen as an indicator of growing similarity in the working lives of women and men (Gunderson, 1998; Statistics Canada, 2000; Picot and Heisz, 2000; Roos and Gatta, 1999; OECD, 1994). This is especially the case for highly educated women, as well as working mothers with young children, whose labour force participation has changed most dramatically in recent years.

In addition, women’s gains in educational attainment, and their entrance into small business ownership and managerial and other non-traditional occupations are also seen to signal a growing convergence between women and men (Bank of Montreal, 1996; Carr, 2000; Industry Canada, 1998; Powell, 1999). Recent studies on ‘second generation’ entrepreneurs, for instance, suggest that women are becoming more like male entrepreneurs in terms of their business

¹ For an exception see Menzies (1998) *Women and the Knowledge Based Economy and Society*, and Gunderson, M. et. Al. (1998). In the U.S., Reich (2001) also considers gender issues in *The Future of Success*.
Men’s and Women’s Quality of Work in the New Canadian Economy

approach, goals, and sector of operation (Moore, 1999). While many factors underlie these changes, the growth in the knowledge based sectors of the economy, and rising educational attainment and skill development on the part of women, are thought to play major roles in the changing profile of female entrepreneurs (Industry Canada, 1998). Similarly, a range of studies document the gains by women in management and professional occupations, emphasizing the key role that education and human capital development have played in this process (Hughes, 2001; Powell, 1999; Reskin and Roos, 1990; Rubery and Fagan, 1995).

The prominent version of the convergence scenario attributes this to a rising of the floor for women's employment. However, not all analysts share this interpretation. Some view convergence as a result of worsening outcomes for specific groups of men, rather than rising outcomes for women (Armstrong, 1996; Fudge, 1996; Standing, 1987). This reflects pervasive downward pressures on real earnings, job security and opportunities resulting from the erosion of well-paid manufacturing and other blue-collar jobs – trends which have largely affected men with lower levels of education.

Divergence

Despite the gains made by some women in recent years, other observers argue that the work situations of women and men continue to diverge. Women's higher rates of part-time work and their segregation into low-paying traditionally 'female' occupations are two key points of difference. Media stories about discrimination, harassment, or work-family conflict also highlight many of the challenges faced uniquely by working women today.

For example, a substantial body of research on the 'glass ceiling' points to a persistent gender gap in women's and men's access to upper management levels (Andrews et al., 1994; Catalyst, 1997, 1998, 1999; Hughes, 2000; Orser, 2000; Powell, 1999; Ragins et al, 1998). So while women have made good progress in entry- and middle-level management positions, they have not advanced as highly as their male peers in the executive level. Similarly, despite the entrance of women into 'non-traditional' professional and high tech careers, their numbers are relatively small. Moreover, women in non-traditional professions are concentrated in less lucrative and less prestigious sub-specialties (Reskin and Roos, 1990). Other analysts also point to trends such as women's higher prevalence in non-standard work (i.e., part-time, temporary, own-account self-employment) and their greater responsibility for caring for children and other family members as persistent indicators of male-female divergence (Duffy, 1997; Vosko, 2000).

The emerging new economy is also thought to bring about divergence – or 'polarization' – within the sexes rather than between them. From this perspective, the fortunes of highly educated and skilled women and men converge, through access to good incomes, job security, and career opportunities, while less educated men and women find themselves increasingly in poorly paid, insecure jobs (Armstrong, 1996; Fudge, 1996; Acker, 1992; Sullivan, 1989).

Assessing the Current Situation

What is the current situation for women and men in the Canadian labour market? Does the evidence point to convergence or divergence and what forms do these trends take? One way of assessing this debate is to examine traditional labour market indicators such as labour force participation, earnings, and work status. These trends are summarized in Box 1. While this does not provide a complete picture of the work experience of women and men, it is a starting point from which to build in later sections of the report.

Box 1: Traditional Labour Market Indicators

Labour Force Participation: Nowhere is convergence more apparent than in labour force participation rates. Since the mid-1970s, women's participation rate has risen from 45.7 to 59.7 percent, while men's has decreased from 77.6 to 72.5 percent. Over this period, the 'gender gap' in labour force participation rates has declined from 31.9 to 12.8 percentage points. Convergence in labour force participation rates has been greatest amongst highly educated workers. In 2001, the gender gap in labour force participation was negligible among women and men with university degrees, while remaining wide (over 18 percent) among women and men with less than high school education.

Education: Canadian women have also made significant gains in their education. They currently make up 55 per cent of bachelor/professional students, 50 percent of master's, and 42 percent of PhDs.

Occupation: Canadian women have also increased their presence in many 'knowledge occupations' (managers, professionals) associated with the new economy. However, the segregation of women and men into distinct occupations persists in other areas. For example, in 2001, more than half of Canadian women worked in clerical/administration and sales/service jobs, compared to just one-quarter of men. By contrast, 41 percent of men worked in primary, trade/transport/construction, and processing/manufacturing occupations, while this was the case for just 9 percent of women.

Non-Standard Work: Both women and men have experienced increases in part-time employment. In 2001, 27.1 percent of women and 10.4 percent of men worked part-time. Part-time employment varies by education, with 20 percent of women with a university degree worked part-time, compared to 42 percent of those with less than high school. Women and men's rate of temporary work is fairly similar (12-13 percent). While temporary employment among women does not vary by education, there are substantial gender differences in this regard, with 14 percent of university-educated women compared with 8 percent of university-educated men in temporary jobs.

Self-Employment: Women and men have been affected differently by the rise of self-employment in Canada. Own account self-employment has risen for both women and men, especially in the 1990s, but with a widening gender gap. In contrast, the gender gap has narrowed amongst the self-employed with employees.

Unionization: Rates of unionization for women and men have converged over the last few decades. While men's membership has declined, women's has increased, largely due to the growth of public sector unions. In 1976, the gender gap in unionization was roughly 15 percentage points – with just over 20 percent of women in a union compared to over 35 percent of men. In 2001, the gender gap was just 2 percentage points, with 31 percent of women and 33 percent of men being union members.

Earnings: Amongst full-time workers the gender gap has fallen from 59.1 percent in 1976 to 72.5 percent in 1997 – a result of stagnant earnings for men and rising earnings for women. For workers in non-standard jobs, the gender gap has closed even further, reflecting declining male earnings and rising female earnings. For full-time workers, women with less than high school make 72.9 percent of men's earnings, while women with university degrees earn 83 percent. But amongst part-time workers, women earn more than men, except those with university degrees. This is because women who work part-time tend to be older, better educated, with more work experience, whereas men are more likely to work part-time in their youth.

Sources: Statistics Canada (2001a; 2001b) and Statistics Canada *Labour Force Survey* Microdata File.

Taken together, the labour market indicators in Box 1 suggest some signs of convergence in the working lives of Canadian women and men. Whether we consider labour force participation, earnings, access to knowledge occupations, or union representation, women and men's working experiences seem to be becoming more alike. But there are important exceptions to this convergence pattern, most notably the persistent segregation of women and men into different occupations, and the much higher rates of part-time work for women. Overall, convergence is far more evident amongst highly educated workers than those with lower levels of education. This suggests that educational attainment has become even more important for labour market success. So where we find the greatest divergence between men and women – or the persistence of traditional patterns – is among workers with lower levels of educational attainment.

These traditional labour market indicators capture at the most basic level the work transformations associated with the emerging 'new' or knowledge-based economy. Looking further, strong employment growth in management and professional jobs, and in the public sector, played a key role in altering women's work situations, bringing them closer to the 'male norm' through better wages, security, and opportunities (Hughes, 2001). As well, federal and provincial legislation has strengthened women's rights to equal employment opportunities, equal pay for work of equal value, and maternity leave. However, in the 1990s, the transition to a knowledge-based economy was marked by restructuring and downsizing, fuelling the decline of secure, full-time jobs (Betcherman and Lowe, 1997).

Other forces of change also reshaped the work realities of the past decade. Among these is the spread of information technology (IT), which is double-edged in its potential to improve or undermine working conditions. IT offers opportunities for more flexibility around where and when work is performed; it also has fuelled the rise of a 'just-in-time', '24-7' work world. But it is not just changes in the workplace that affect an individual's capacity to be productive. Crucial as well are the intersections of paid work and family life, which for women mean responsibilities for childcare and eldercare. Thus, the persistence of traditional women's roles outside the labour market interacts with the paid work trends we have described. This too is part of the new economy. When combined with organizational downsizing and restructuring, it is not surprising that researchers are detecting an erosion of the quality of life and productivity through long work hours and rising workload expectations, job stress, and work-family conflict (Duxbury and Higgins, 2001; <www.jobquality.ca>).

Focusing on the Quality of Work

A complex and dynamic image of the new economy is emerging. If this image remains opaque in spots, it is because we know little about how men and women actually experience working conditions, the expectations they take with them into workplaces, and the possibly different impacts of information technology. These additional dimensions of what may or may not define a 'good job' are the missing pieces in our understanding of the issues of convergence or divergence discussed above.

In this report, rather than focusing on the big 'structural' forces that are transforming work, we view the rise of the new economy from the vantage point of workers. This offers a multifaceted assessment of the quality of work at the start of the 21st century for both women and men, allowing us to capture even subtle gender differences in work experiences. Our position is that to fully grasp the implications of the knowledge economy for women and men, we must account for

a wide range of job and workplace features. A logical starting point is to ask: “What do women and men want in a job?” Answers to this question provide a benchmark for judging whether the ‘new economy’ trends of recent years are meeting the needs of individual men and women, and whether there is convergence or divergence on these subjective dimensions of work.

This approach has several advantages for human resource management practices and public policy. Many employers are striving to become knowledge-based organizations and, at the same time, are facing the challenges of succession, recruitment and retention that will only increase as the baby boom generation retires. We believe that a better understanding of how both women and men experience work – in short, the quality of their jobs – has direct implications for achieving the goal of becoming a ‘workplace of choice’. It is not enough to set goals for attracting and retaining skilled knowledge workers, if males and females in this talent pool are seeking different things in a job.

Both employers and policy makers have directly linked innovation and productivity to the quality of human capital available. We are simply extending this argument to include factors, such as employment relationships and work rewards, which can help or hinder the development and use of human capital. From a policy standpoint, information on male-female differences (or similarities) in the quality of working life enables more effective responses to issues such as work-family balance or workplace training and learning.

In the remainder of this report, we draw on two recent surveys to illuminate these concerns. These are the *2000 CPRN-Ekos Changing Employment Relationships Survey* and Statistics Canada’s *2000 General Social Survey* (see Box 2). These surveys provide valuable information on the quality and experience of work, the features women and men desire in a job, and the impact of information technology on the quality of work. Given the central role of knowledge and expertise in the new economy, we compare the situation of ‘knowledge workers’ – which we define as those with university education – with other workers.² We believe that the end result is a much more complete picture of gender and employment at the start of the 21st century.

² While education is not a perfect proxy, it is one of the most appropriate measures available and a central indicator of the knowledge-based economy (OECD, 1996:43).

Box 2: Our Two Data Sources

The 2000 CPRN-Ekos Changing Employment Relationships Survey (CERS)

This telephone survey interviewed 2,500 currently employed Canadian residents 18 years of age or older. Quotas were assigned by region (determined by each province's population as a percentage of the whole Canadian population) to ensure that the sample would be nationally representative. A probability sample of this size and design has a margin of error of plus or minus 2 percent, 19 times out of 20.

The survey used a household-based sample frame by drawing from a randomized database comprised of all telephone directories published in Canada, supplemented with randomly generated telephone numbers to ensure that unlisted telephone numbers also had an equal chance of being called. Interviews were conducted by trained, experienced and bilingual Ekos staff using a computer-assisted telephone interviewing (CATI) system. Households were called eight times before a number was retired in the absence of a response. 2,500 individuals completed interviews, conducted in early 2000. The response rate for the functional sample was 39.2 percent (the functional comprises all cooperative contacts).

The data were reviewed against the population distribution of province, age, gender and industry, using Statistics Canada's *Labour Force Survey (LFS)*. The CERS data are weighted for gender and age to correct for slight sample variations from the LFS.

In addition to measuring trust, commitment, communications, influence and the legal aspects of employment relationships, the questionnaire also collected information on respondents' socio-demographic characteristics, labour market and workplace contexts, and individual and organizational outcomes of relevance to employment relationships. Where possible, questionnaire items were replicated or adapted from academic research and Statistics Canada surveys, and several recent policy-oriented surveys conducted in Europe.

For details see: Lowe and Schellenberg, *What's a Good Job? The Importance of Employment Relationships*. (2001).

2) The 2000 General Social Survey (GSS)

The *2000 General Social Survey* examined access to and use of computer technologies in Canada. Using a telephone survey, 25,090 individuals were interviewed between January and December 2000. The sample included all persons 15 years of age and older in Canada, with the exception of residents of the Yukon, Northwest Territories and Nunavut, and full-time residents of institutions. Stratified sampling by province and census metropolitan area was used to ensure the sample was nationally representative. Data was collected through a computer-assisted telephone interviewing (CATI) system. The overall response rate was 80.8 percent.

Data collected through the 2000 GSS includes standard socio-demographic information, as well as information on the following issues: general use of technology and computers, work and education background, computer technology in the workplace, development of computer skills, Internet and e-mail use, children's use of technology, security and information on the Internet.

For details see: Statistics Canada, *2000 General Social Survey: Public Use Microdata File Documents and User's Guide* (2001b).

Section 2: What Women and Men Want in a Job

As a starting point, we begin by asking what women and men want in a job. Employers who meet these expectations will be better able to attract highly skilled and committed workers. This will become even more important in the next decade as baby boom generation retirements increase competition for workers in many occupations. Women's high labour force participation rate and educational levels means that they are an increasingly important source of skilled labour in the knowledge economy. Offering the types of employment opportunities that these women value is one way that employers will be able to create 'workplaces of choice'. And if indeed women and men vary in what they value in a job, this too can assist employers in fine-tuning human resource management practices to the demographics of their workforce.

Employers will also need to position themselves to retain valued workers already on staff. Currently, almost one-quarter of individuals employed in professional and administrative occupations in business and finance are 50 years of age or older (*Labour Force Survey*, calculations by authors). The age profile is even older in other sectors, such as education, where 29.1 percent of teachers and professors are now 50 plus.³ Offering older workers job characteristics they value may be one way to persuade them to remain on the job. In addition to remuneration, factors such as flexible schedules, interesting work assignments, work-life balance, and an opportunity to contribute to the community may be ways to entice them to stay. Again, this underscores the importance of assessing what it is individuals value in their job and what could be 'played up' to make those jobs more attractive. Furthermore, determining what employees want in a job and offering it to them can have an impact on organizational performance and the bottom line. Employees whose jobs meet their expectations will likely be more satisfied.

Do women and men value different job features? Some analysts suggest that due to upbringing and socialization, women and men may be attracted to different types of work (e.g., women may be more oriented towards work that involves helping others). Others suggest that the tendency for women to carry a greater share of responsibility for children and family may lead them to place greater value on jobs that offer flexibility and work-family support. Past research suggests that while men emphasize extrinsic factors of income and advancement, as well as freedom, importance of work, leadership, and recognition, women place more value on helping others, having friendly co-workers or managers, and having good working conditions and flexibility (Lueptow, 1996). However, many of these studies are dated and there has been little recent research on these questions in the current Canadian context.

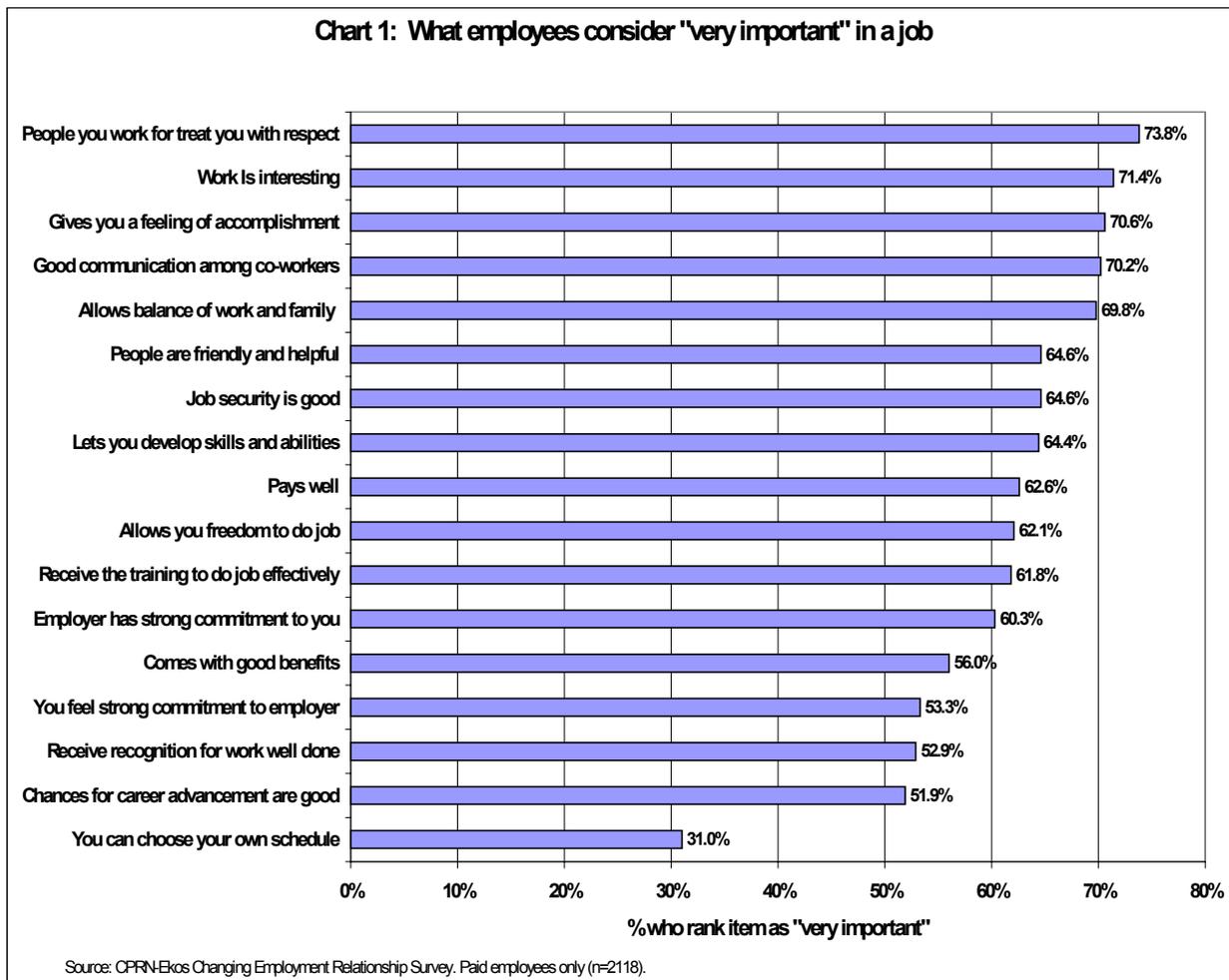
Highly Valued Job Features

Individuals who responded to the CPRN-Ekos *Changing Employment Relationships Survey* were asked "If you were looking for a new job today, how important would the following be for you?" Respondents rated various job characteristics on a scale ranging from 1 (not at all important) to 5 (very important). We will focus on the ratings of 'very important'. For the most part, we have limited our analysis in this section to paid employees as this allows us to draw more accurate

³ The age profile of the retail sector is far younger, as 42 percent of all employed individuals are under 30 years of age and only 16 percent are 50 years of age or older.

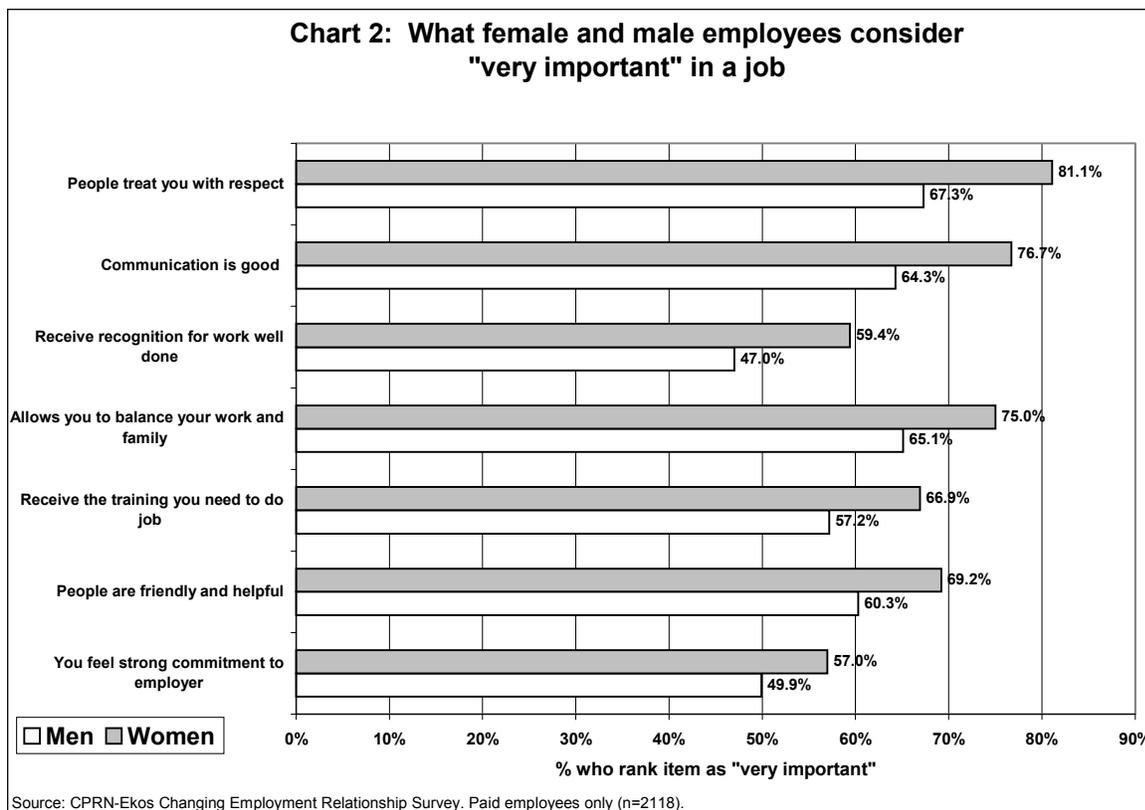
comparisons between women and men than would be the case if self-employed individuals were also included.⁴

Chart 1 shows that non-monetary aspects of employment are highly rated by Canadians. Being treated with respect tops the list as the characteristic deemed to be ‘very important’ by the largest share of respondents (73.8 percent). This is followed by other intrinsic characteristics, such as work that is interesting (71.4 percent) and provides a sense of accomplishment (70.6 percent), or provides good communication between co-workers (70.2 percent) and allows a balance of work and family (69.8 percent). While important, extrinsic features such as good pay (62.6 percent) and benefits (56 percent) come much further down the list.



⁴ Self-employed individuals – about two-thirds of whom are men – tend to have somewhat different outlooks and employment conditions than paid employees. Consequently, the inclusion of self-employed individuals would inflate the differences between women and men. By limiting the analysis to paid employees, we are able to draw more accurate gender comparisons.

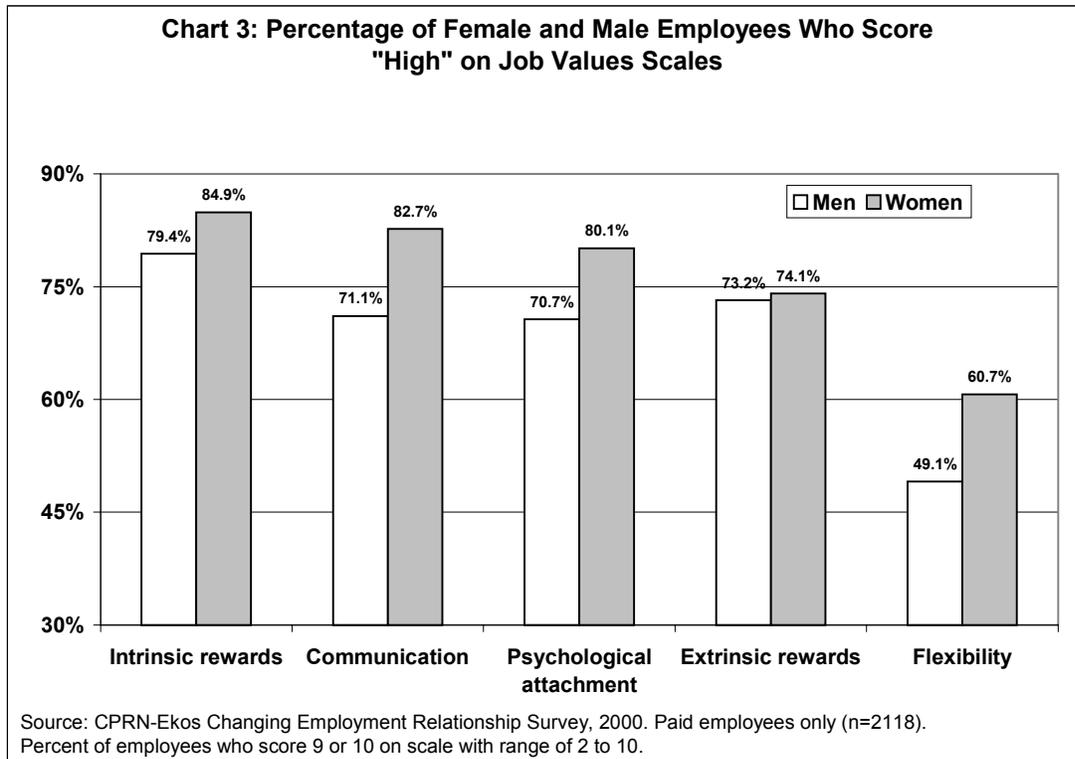
There are, however, important differences in what men and women value in a job. As shown in Chart 2, a larger share of women than men place a high value on issues of respect, communication, recognition, work-family balance and co-worker relations. This suggests that employers need to consider carefully how their human resource policies and practices could have different implications for female and male employees. While ‘soft’ issues are clearly important for all workers, women have raised the bar when it comes to people-supportive workplace climates. Initiatives designed to foster a positive climate among employees will likely resonate especially among females. Conversely, if respect, recognition and communication are lacking in an organization, they may be the first to become disengaged.



To get an overall picture of the value placed on different job features, we have combined the various items in Charts 1 and 2 into five scales: psychological attachment (employer commitment, employee commitment and respect); extrinsic rewards (pay, benefits, security and opportunities for advancement); communication and social relationships (good communication, recognition, and friendly co-workers); intrinsic rewards (interesting work, sense of accomplishment, allows to develop skill) and flexibility (can choose schedule, can balance work-family).⁵

⁵ In addition to the questions on what they value in a job, CERS respondents were also asked a comparable set of questions about what they actually have in their current job. A factor analysis was run on this latter set of questions and five scales were constructed based on the results. The Job Values scales presented in this section mirror those five job characteristic scales. This approach provides the basis for our discussion of job quality deficits in Section 4. See Box 3 for further discussion.

Chart 3 below shows the percentage of respondents who scored at the ‘very important’ or high end of the scale (a score of 9 or 10 on a scale with a minimum value of 2 and a maximum of 10).



As Chart 3 shows, intrinsic job rewards are highly valued by a large majority of Canadian workers. Clearly, a job is far more than a paycheque to most people, with interesting work, feelings of accomplishment and opportunities to learn being prized. A slightly larger proportion of women than men scores ‘high’ on this scale. Good communication on the job is also highly valued, especially by women. The share of women scoring high on the communications scale is 12 percentage points larger than the share of men. This confirms other research that shows women place particular value on having friendly and supportive co-workers (Lueptow, 1996). Similarly, a larger share of women than men place a high value on the psychological aspect of employment, specifically commitment and respect. Men and women equally value extrinsic job rewards. But a much larger share of women than men place a high value on flexibility and the ability to balance work and personal life, no doubt reflecting the greater responsibility that women tend to assume for childcare and household work

To explore further the importance of gender on these issues, a multivariate regression analysis was run on each of the job preference scales in Chart 3. This allows us to determine whether gender remains a significant influence on work values once other factors, such as income, hours of work and industry are taken into account. Results confirm that gender indeed matters in terms of communications, psychological attachment, flexibility and intrinsic rewards (see Appendix Tables 1A through 1E).

To sum up, while the ‘bread and butter’ issues of pay and benefits are important to all Canadians, ‘softer’ issues such as respect, good communication, the opportunity to do interesting work, and to balance work and family seem to count even more. Generally, women place greater importance than men on good communication and social relationships in the workplace, on having an employer who respects and is committed to them, and on work-family balance and flexibility. Employers seeking to attract and retain female employees could position themselves as ‘employers of choice’ by adopting workplace policies and practices that address these issues, and by making these a visible part of their human resource management strategies.

What Knowledge Workers Value in a Job

A knowledge-based economy is built on human capital: people’s talents, skills and knowledge. Many experts are predicting labour shortages in the next 5 to 10 years among the most highly educated workers, and as a result, increased competition among employers for these workers. And as noted in the Federal government’s *Knowledge Matters* paper, “By 2004, more than 70 percent of all new jobs created in Canada will require some form of post-secondary education, and 25 percent of new jobs will require a university degree” (Government of Canada 2002). Having a clear understanding of what knowledge workers value in a job could give responsive employers an edge in this environment. Even today, more than half (53 percent) of today’s workforce has a post-secondary credential (Labour Force Survey, calculations by authors).

To assess whether or not Canadians with different levels of educational attainment place the same value on specific job characteristics, we draw comparisons between female and male employees in three educational groups – high school or less, non-university post-secondary certificate or diploma, and university degree (see Appendix Table 2 for details). An important question is whether the values of women and men tend to converge or diverge as educational attainment increases. We noted earlier that, when measured using traditional indicators (such as participation rates), the labour market experiences of women and men are most similar among those with university degrees. In this context, one might expect values to converge as well.

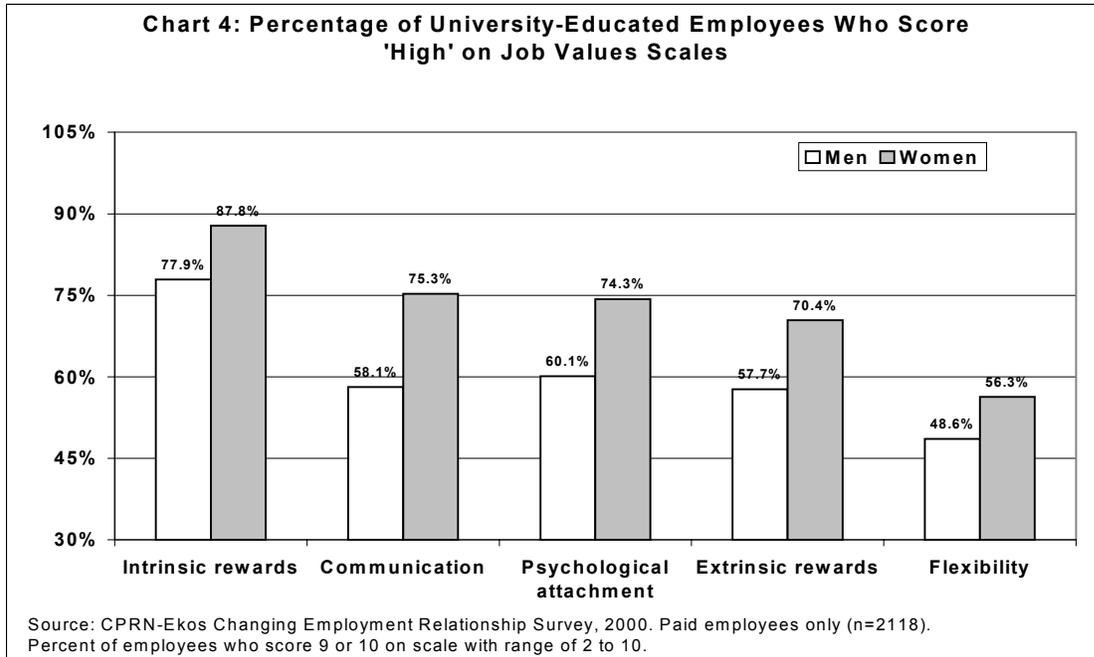
Table 1: Gap Between Proportions of Female and Male Employees Who Place High Value on Specific Job Characteristics, by Educational Attainment, Canada, 2000

	High School or less	Certificate/ Diploma	University Degree
Intrinsic Rewards	3.6	4.5	9.9
Communication	9.3	11.2	17.2
Psychological Attachment	9.3	6.6	14.2
Extrinsic Rewards	- 2.3	- 2.4	12.7
Flexibility/Work-Life Balance	10.6	15.5	7.7
Source: CPRN-Ekos Changing Employment Relationships Survey, 2000. Paid employees only (n=2118).			
For each of the five scales, the table reports the percentage-point difference between the proportion of females, compared to males, who score 9 or 10 on a scale with a minimum value of 2 and a maximum value of 10.			

This is not the case. Table 1 shows the percentage-point difference in the shares of women and men who place a high value on specific job characteristics. On several scales, gender differences in work values are smallest among women and men with high school or less and are largest among those with a university degree. For example, among individuals who do not have a post-secondary credential, comparable shares of women and men place a high value on intrinsic rewards (e.g., interesting work) and extrinsic rewards (e.g., pay, benefits and security). The gender difference on these items is about 3 percentage points. Among university graduates, the differences between women and men on these issues range from 10 to 13 percentage points. The same pattern is evident when communication and psychological attachment are considered.

The greatest divergence among women and men with university degrees is evident in terms of good communication, respect, recognition, commitment, and skill development (see Appendix Table 2). The share of women placing a high value on these attributes is at least 13 percentage points higher than the share of men. In contrast, the desire for interesting work is pervasive, as there is little variation between men and women and across education on the importance attached to this job attribute.

As a final overview, Chart 4 shows the shares of university-educated women and men who score high on the five job preference scales. Again, there is a strong pattern of gender divergence among this group on all values. These gendered work aspirations suggest that employers attempting to foster a positive workplace climate may discover that this goal resonates most strongly among their well-educated female employees.



It should also be noted that as level of educational attainment increases, the percentage of workers who consider all these job features ‘very important’ actually declines. We don’t have a ready explanation for this. It seems counter-intuitive: we might expect higher educational attainment to raise, not lower, an individual’s job expectations. Yet, it is also possible that better educated workers are more likely to have better quality jobs, thereby reducing their importance as an ‘ideal’. Alternatively, perhaps getting more education raises an individual’s awareness of what is realistic to achieve on a range of job rewards. Clearly, this requires further research. In practical terms, employers should not assume that high-school educated workers only care about their pay.

Conclusion

In this section, we have provided a behind the scenes look at the newly emerging economy by focusing on women’s and men’s work experiences. On balance, our evidence points to a much different pattern than that suggested by the traditional labour market indicators outlined in Section 1. Beneath the surface of the converging labour market situations of highly educated women and men we find divergent work values. In contrast, less educated women and men are more similar, placing a high value on the majority of job features.

We have debunked two myths of the knowledge economy. First, it is inaccurate to assume that highly educated knowledge workers, especially young ones, are unique in seeking out personally rewarding work. In fact, the quest for personally satisfying and stimulating work is widespread among men and women regardless of their educational backgrounds. Employers, therefore, would be well advised to view these job features as critical ingredients of an employee’s satisfaction – and whether they stay or leave.

Another myth is that of ‘knowledge workers’ as footloose ‘free agents’ pursuing their own interests. Yet given that commitment, respect, communication and workplace relations matter a lot to educated female workers, this suggests greater emphasis on stable employment relationships – not something that mobile knowledge workers would easily find. If it is true, as some analysts argue, that downsizing and restructuring over the past decade took a particularly heavy toll on women (Armstrong, 1996, 1997; Bakker, 1996), then it is possible that we are picking up a reaction to these experiences. In contrast, university-educated males seem to place far less value on these ‘soft’ aspects of work life, and indeed, may be the one group that fits the ‘free agent’ image of a knowledge worker. This reflects a gender-based work value gap between male and female university-educated workers, one of the clearest signs of divergence along gender lines in the new economy.

Section 3: What Women and Men Have in the Workplace

Now that we have a clearer picture of what women and men value in jobs, our next step is to determine if their current jobs meet these expectations. How do employees assess the quality of their jobs? Workers whose job conditions are meeting their needs are more likely to be committed and satisfied. Furthermore, employers who meet their employees' job expectations will develop a reputation as a good place to work. A previous CPRN study, *What's a Good Job: The Importance of Employment Relationships* (Lowe and Schellenberg, 2001), provides support for these claims.

In this section, we examine a wider range of detailed job characteristics than we used earlier to assess workers' job values. This offers a comprehensive look at job quality indicators that are likely to influence employees' perceptions of what defines a workplace of choice. From an employer's perspective, many of the same workplace features that workers seek contribute to results such as innovation, productivity and efficiency. What we are suggesting, then, is that for both employees and employers the ideal 'new economy' workplace has the following characteristics: supports healthy and balanced lives among employees; opportunities for learning and skill development; positive workplace relations; high trust and commitment; and provides challenging, interesting and autonomous work. We now document how widespread these conditions are, and whether men and women have equal access to such jobs.

Is Job Quality in the 'New Economy' Gendered?

Surprisingly, 'job quality' has received less attention than we might expect in light of growing concerns among employers about staff recruitment, retention and development. After all, becoming an 'employer of choice' means offering satisfying jobs in a high-quality work environment. Similarly, debates about the changing nature of women's employment tend to focus on the labour market trends reviewed earlier in the paper – occupational shifts, non-standard work, earnings, and so on – rather than the 'soft' features of jobs and work environments. For employees, we've documented that there are many ingredients to a 'good job' beyond just pay and benefits. In fact, some of the most highly valued aspects of jobs – like respect – have little or nothing to do with the economic package.

How do men and women evaluate the quality of their current jobs? To answer this question, we begin by comparing female and male employees' assessments of specific job quality indicators that correspond to the 5 dimensions of job values described in the last section. Table 2 lists these indicators according to the size of the female-male gap. The percentage figures in the right-hand column tell us how different women are from men in giving very positive ratings to these job quality aspects.

Several key points emerge from Table 2. As a yardstick for measuring job quality, these indicators suggest that only a minority of workers give highly positive ratings. For example, only one in ten strongly agree that they can influence employer's decisions that affect them. And about the same proportion strongly agree that their values are similar to their employer's values. The job features receiving more positive assessments (i.e. more than one in four workers strongly

agreeing) are intrinsic rewards, communication and psychological attachment. This is an important finding; recall that all of these job features are highly valued.

In terms of a gender gap, women and men have similar levels of agreement or satisfaction with most of the job quality indicators in Table 2. Only three items – a feeling of accomplishment, respect, and friendly and helpful coworkers – is the female-male gap greater than 5 percentage points. This is mainly due to higher percentages giving these positive ratings. What is also interesting is that on all indicators – except pay, where the difference is tiny – women give slightly more positive assessments than do men.

Overall, there are few gender differences in perceived job quality. This point is reinforced by the job satisfaction and morale measures reported in Table 3. Again, we find only small differences between men and women on these job features, with only slight variations across levels of education (data not shown).

Table 2: Job Quality Indicators by Gender, Canada, 2000

<i>Percentage who give very positive assessments of the following features of their job¹:</i>	Job Value Dimension	Men percent	Women percent	Gender Gap²
The pay is good	Extrinsic rewards	16.2	15.8	-0.4
You can influence your employer's decisions that affect your job or work life	Work-life balance/flexibility	9.7	10.1	0.4
Your job security is good	Extrinsic rewards	20.1	21.0	0.9
Your employer has a strong commitment to you	Psychological attachment	16.7	18.3	1.6
You can choose your own schedule within established limits	Work-life balance/flexibility	10.8	12.6	1.8
You receive recognition for work well done	Communication	19.5	21.8	2.3
I find that my values and employer's values are similar	Psychological attachment	9.7	12.4	2.7
The work is interesting	Intrinsic rewards	26.3	29.6	3.3
Frequently receive feedback needed to do your job well	Communication	13.7	17.5	3.8
You get the training needed to do your job effectively	Intrinsic rewards	18.9	23.1	4.2
Your job allows you to balance your work and family or personal life	Work-life balance/flexibility	18.0	22.6	4.6
Your job lets you develop your skills and abilities	Intrinsic rewards	24.3	29.3	5.0
Communication is good among the people you work with	Communication	25.7	30.7	5.0
Your job gives you a feeling of accomplishment	Intrinsic rewards	29.2	34.9	5.7
Your employer treats you with respect	Psychological attachment	27.4	36.3	8.9
The people you work with are friendly and helpful	Communication	28.6	39.0	10.4

Source: CPRN-Ekos Changing Employment Relationships Survey, 2000. Paid employees only (n=2118)

1. All statements were answered using 5-point scales. Male and female columns report percent of respondents who answered 5 on these scales (e.g., 'strongly agree').

2. Percentage by which women differ from men.

Table 3: Job Satisfaction and Morale by Gender, Canada, 2000

<i>Percentage who 'strongly agree' or give very positive ratings of the following assessments of their job¹:</i>	Men percent	Women percent	Gender Gap²
You look forward to going to work on an average day (strongly agree)	18.5	18.4	-0.1
How satisfied are you with your job? (very satisfied)	23.8	26.1	2.3
It would be difficult for me to find another employer as good as my current one (strongly agree)	11.0	14.7	3.7
The morale in your workplace is low (strongly agree)	10.6	12.6	2.0

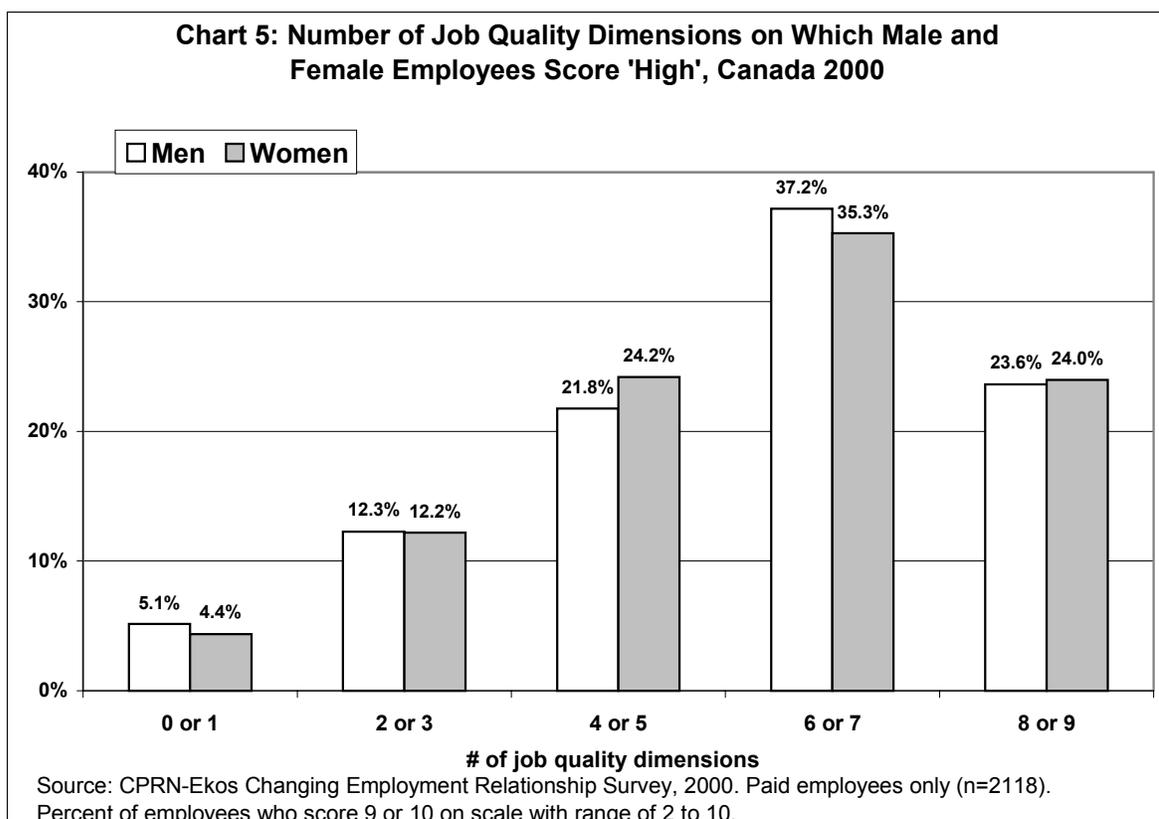
Source: CPRN-Ekos Changing Employment Relationships Survey, 2000. Paid employees only (n=2118)

1. All statements were answered using 5-point scales. Male and female columns report percent of respondents who answered 5 on these scales (e.g., 'strongly agree').

2. Percentage by which women differ from men.

Still, it is useful to expand this analysis to include a wider range of job quality indicators to see if these gender patterns are more deeply rooted. Chart 5 is based on an analysis of about three dozen job quality indicators (see Appendix Table 3 for details). We identified nine broad dimensions of job quality: communication and social support; intrinsic rewards; health and safety; commitment and trust; extrinsic rewards; autonomy; flexibility; job demands; and resources. Chart 5 reports the percentage of males and females who score high on these job quality dimensions. Note first that about 17 percent of employees rate their jobs highly on only none to three dimensions. Job quality is a concern for these individuals given that they do not have favourable perceptions of their worklife on most of the nine dimensions included here. At the other end of the continuum, about one-quarter of Canadian employees have positive assessments of their jobs on most or all (8 or 9) of these nine dimensions. Women and men are equally represented in this group who can be said to have 'very good' jobs. Similarly, comparable shares of women and men (35 and 37 percent) have positive assessments on six or seven of the job quality dimensions – certainly grounds for claiming they have 'reasonably good' jobs. Neither are gender differences evident among women and men with comparable levels of education (e.g., university graduates).

If a worker's gender does not help to explain who has access to good quality jobs, what does? While this question is much larger than we can adequately address here, further analysis does identify a number of important factors in this regard. Job quality increases with one's level of education. Education and occupation are closely linked, so it is not surprising to find positive assessments of job quality among employees in managerial and professional jobs. When viewed in the context of women's high levels of educational attainment and increased access to jobs in management and professions, noted above, it becomes clearer why there are few gender differences in assessments of job quality.



Job quality tends to be lower amongst part-timers, temporary workers, and among those who do not work a regular day shift. So the new economy is much like the old, where full-time, permanent employees still have the best access to the best quality jobs. In terms of industrial sector, good quality jobs are most prevalent in dynamic services, such as finance, insurance, real estate, professional, information and managerial services. In contrast, employees in more traditional, less-skill-intensive sectors such as retail and food and accommodation services have the lowest job quality, along with employees in goods-producing industries. Finally, firm size is associated with job quality, as both women and men employed in smaller firms tend to have more positive assessments than those in medium-sized and larger firms. And quite clearly, the types of organizational strategies adopted by firms is also associated with assessments of job quality, as women and men who have experienced downsizing in the past year have far less favourable assessments than those employees who have not.

Table 4: Average Number of Job Dimensions on Which Employees Scored “High” (on Range of 0 to 9), by Selected Characteristics, Canada 2000

	Total	Men	Women
Education			
High school or less	5.4	5.4	5.5
Certificate or diploma	5.8	5.8	5.8
University degree	6.2	6.3	6.0
Occupation			
Management	6.7	6.8	6.6
Professional	6.2	6.4	6.0
Technical	6.0	6.1	6.0
Clerical	5.5	na	5.5
Sales / Service	5.4	5.4	5.4
Skill manual	5.4	5.4	na
Semi-/ Unskilled manual	4.8	4.9	na
Hours			
Less than 30	5.4	5.1	5.5
30 to 44	5.6	5.5	5.7
45 or more	6.1	6.1	6.0
Work Status			
Temporary	5.3	5.1	5.4
Permanent	5.8	5.8	5.8
Schedule			
Regular day shift	5.9	5.9	6.0
Other	5.3	5.3	5.2
Industry Sector¹			
Goods-producing	5.5	5.5	5.6
Distributive services	5.7	5.7	5.7
Dynamic services	6.0	6.0	6.1
Non-market services	5.8	6.1	5.8
Traditional services	5.5	5.5	5.5
Public Administration	5.7	5.8	5.7
Firm Size			
Less than 10 employees	6.0	6.0	6.0
10 to 24 employees	5.7	5.7	5.7
25 to 100 employees	5.7	5.7	5.6
100 to 499 employees	5.5	5.5	5.6
500 or more employees	5.9	5.9	5.9
Downsizing			
Experienced in past year	5.1	5.0	5.1
Not experienced in past year	5.9	5.9	5.9

Source: CPRN-Ekos Changing Employment Relationships Survey, 2000.

¹ Goods-producing industries include agriculture, mining and forestry, manufacturing and construction. Distributive services include transportation, warehousing and wholesale trade. Dynamic services include finance, insurance, real estate, professional, information and management services. Non-market services include education, education and social services. Traditional services include retail trade, food and accommodation.

Conclusion

To recap, despite a gender gap on some specific dimensions of job quality (e.g., women evaluate their extrinsic rewards, autonomy, and job demands less favourably than do men), our overall measure of job quality shows that women's and men's experiences are very similar. Generally speaking, our answer to the question posed at the start of the section is that job quality is not gendered. This required looking beyond gender. When we did this, we discovered that some of the occupations and industrial sectors symbolizing the new knowledge-based economy offer very good quality jobs. But there are cross-cutting trends, for the new economy is also marked by a decline in permanent employment, the persistence of large firms, and turbulent organizational change – all of which are associated with lower quality work. Thus, the work restructuring and reconfiguration of job opportunities that shape the new economy have equally affected – positively or negatively – women and men at this broad level.

In 2000, one-quarter of women and men reported they had very good quality jobs. Given the link between the quality of work and the quality of life, as a society, should we be setting a higher goal? If so, what would it be, and how would we achieve it?

Section 4: Job Quality Deficits

So far, we have documented what women and men value in a job and then assessed the quality of their current jobs. Now we are in a position to bring together these two perspectives on job quality. In this section, we examine the discrepancies between ‘desired’ and ‘actual’ job features – or what we call the job quality deficit. Box 3 outlines the methodology we use. With this information, we can compare the discrepancies experienced by women and men, and identify specific groups of workers whose current jobs do not meet their aspirations. Beyond this, we can also explore questions about how discrepancies affect individual workers and employers by measuring their impact on work related outcomes. For example, what are the consequences for job satisfaction and turnover for those who experience large discrepancies between their actual and desired opportunities for advancement? How is workplace morale affected for those who value, but do not have, good communication, respect, and friendly co-workers in their job? In examining these types of questions, we focus on several key outcomes, including employee turnover, willingness to join a union, absenteeism, workplace morale, and job satisfaction.

Box 3: Measuring Discrepancies Between What Workers Want and Have

We compared individuals’ responses to similar questions on the importance placed on specific job features (values) with the extent to which they have these features in their current job. For each pair of questions, the individual’s score on what they actually have in their job is subtracted from what they would want in their job. For example, if a person says that good communication is ‘very important’ to them (a score of five on a five-point scale) and ‘strongly agrees’ they have good communication in their job (also a score of five on a five-point scale), they would have a ‘discrepancy score’ of zero (five minus five) – or no discrepancy. On the other hand, if they say ‘good communication is ‘very important’ and ‘strongly disagree’ that they have good communication in their job (a score of one), a discrepancy score of -4 would result (one minus five), indicating a large gap between ‘wants’ and ‘haves’.

To identify general patterns, we have added up the discrepancy scores for related items into the five scales introduced above, including: *psychological attachment*, *extrinsic rewards*, *intrinsic rewards*, *communication*, and *work-family balance*. Each of the resulting scales has a minimum value of -8 and a maximum value of $+8$. Individuals with scores of -8 to -3 are identified as having a ‘large discrepancy’, while those with scores of -2 to $+8$ are identified as having ‘no discrepancy’. We refer to these calculations of discrepancies as job quality deficits.

As shown in Table 4, job quality deficits are most common on issues of flexibility and work-family balance. About one-third of employees have considerably less flexibility in their work schedules and less opportunity to balance their work and personal lives than they would prefer. Similarly, about one-third of employees have a job quality deficit in the area of extrinsic rewards, indicating that their job does not meet their expectations in terms of opportunity for advancement, wages, benefits, and/or job security. About one-quarter of employees have a job quality deficit in the area of psychological attachment, indicating they have less commitment and trust vis-à-vis their employer than they would prefer. And finally, 14 percent of employees experience job quality deficits in the areas of communications and intrinsic rewards. These individuals would prefer better communication and more interesting work than their current employment offers.

The gender gap on four of the five discrepancy scales is negligible, with differences of just two or three percentage points (see Table 5). The only exception is on extrinsic rewards – where the share of women with a large discrepancy is seven percentage points larger. This is not surprising given the gender gap in earnings and women’s greater concentration in non-standard jobs, which tend to offer fewer benefits.

Table 5: Percent of Paid Employees with Large Discrepancies Between What They Value and What They Have in a Job, by Gender and Education, Canada 2000

	Psychological attachment	Extrinsic Rewards	Communication	Intrinsic Rewards	Work-Family/Flexibility
Total	25.8	30.5	13.6	14.0	36.0
Men	24.5	27.3	12.4	13.8	34.3
Women	27.1	34.1	14.9	14.2	37.9
Gender gap (female-male difference)	+ 2.6	+ 6.8	+ 2.5	+ 0.4	+ 3.6
High school or less					
Women	28.7	39.4	15.8	17.1	36.6
Men	26.7	33.3	14.8	16.6	39.0
Gender gap	+ 2.0	+ 6.1	+ 1.0	+ 0.5	- 2.4
Certificate/diploma					
Women	27.0	34.2	13.8	13.8	39.2
Men	26.8	25.7	12.3	13.1	32.5
Gender gap	+ 0.2	+ 8.5	+ 1.5	+ 0.7	+ 6.5
University degree					
Women	25.1	24.6	15.2	9.9	37.8
Men	16.7	16.9	7.9	9.1	27.3
Gender gap	+ 8.4	+ 7.7	+ 7.3	+ 0.8	+ 10.5

Source: CPRN-Ekos Changing Employment Relationships Survey, 2000. Paid employees only (n=2118).

But while the comparison of all female and male employees in Table 4 suggests few gender differences in job quality deficits, this picture begins to change when we also consider educational attainment. As in our earlier analysis of job values, gender differences are much larger among university-educated employees than amongst those with high school education or less. These gender differences range from about 8 to 10 percentage points among female and male employees with a university degree, compared with less than two percentage points among those with high school or less on most scales. Among these highly-educated workers, the gender gap is largest on work-family and flexibility (10.5 percent), followed by psychological attachment (8.4 percent), extrinsic rewards (7.7 percent) and communication (7.3).

In other words, female knowledge workers may be more likely than their male counterparts to experience frustration in finding employment that meets their expectations. This is not a new finding. Orser's (2000) study of women executives found that the most common reasons women gave for leaving a job related to issues of workplace climate, a lack of advancement opportunities, and inadequate compensation. It should be noted as well that it is not just university educated women who experience a gender gap in terms of extrinsic rewards, but that the gender gap on this item is marked for all women regardless of education.

Comparing Employees and the Self-Employed on Job Quality Deficits

In the past decade, some employees sought to better align their work values with their job realities by becoming self-employed. Results from the first national survey of the self-employed in Canada suggests that the majority of these individuals sought self-employment in order to improve the quality of their work life (Delage, 2002: 27). So it is worth asking: to what extent do the self-employed actually have smaller job quality deficits than employees?

As Table 6 shows, the percentage of women and men who have large job quality deficits is lower amongst the self-employed on five of the six job dimensions we have been examining. For example, while roughly one-quarter of women and men who are paid employees report large discrepancies on psychological attachment, this is the case for just 10 percent of women and 13 percent of men who are self-employed. Compared to paid employees, very few self-employed workers experience gaps on communication and intrinsic rewards. Even on work-family/flexibility issues, where we might expect self-employed workers to face challenges because of the demands and long hours typically associated with their work, they are still far less likely than paid employees to experience large discrepancies.

The one exception to this self-employed job quality advantage is extrinsic rewards. As we noted earlier in discussion of employees in large and small firms, it may be that self-employed workers also make a trade-offs between extrinsic rewards and other job features. This may be especially the case for self-employed women, who have much larger discrepancies than self-employed men on extrinsic rewards.

In terms of the gender gap, it is interesting to note that women and men appear to have fairly similar experiences in terms of discrepancies between wants and have, with the exception of extrinsic rewards. Self-employed women are also slightly less likely than men to experience large discrepancies in work-family balance, suggesting as some research indicates that they may

use it as a balancing strategy. More generally, the findings raise questions about whether the better match between desired and actual job features may lead women and men to leave paid employment in more traditional organizations for self-employment, as some researchers have argued (Moore and Buttner, 1997).

Table 6: Large Job Quality Deficits, Employees and Self-Employed by Gender, Canada, 2000

	Women		Men	
	Paid Employee percent	Self-Employed percent	Paid Employee percent	Self-Employed Percent
Psychological Attachment	27.1	10.0	24.5	13.0
Extrinsic Rewards	34.1	38.9	27.3	27.9
Communication	14.9	3.0	12.4	2.7
Intrinsic Rewards	14.2	5.8	13.8	5.4
Work-Family/Flexibility	37.9	15.1	34.3	19.2
Source: CPRN-Ekos Changing Employment Relationships Survey, 2000 (n=2500)				

Why Job Quality Deficits Matter

Beyond asking who is more likely to experience discrepancies, an equally important question concerns the consequences of gaps between actual and desired job features. How do they affect individual and organizational outcomes such as staff turnover and workplace morale? Quite clearly job quality deficits matter, as they directly impact employers' human resource goals.

The likelihood of employees having looked for a job with another employer in the past year is greater among those with various types of job quality deficits (Tables 7 and 8). Differences are largest between persons who do and do not have job quality deficits in the areas of intrinsic and extrinsic rewards. When we add up the number of job quality deficits, we find that persons with deficits in three or more areas are more than twice as likely to have looked for another job as those with no deficits. Similarly, the shares of non-union employees who would likely or very likely want to join a union if one existed in their workplace or profession is substantially higher among those with various job quality deficits. Differences are largest when non-union employees are compared in terms of extrinsic rewards, psychological attachment and intrinsic rewards.

Looking at Table 7, we see that job quality deficits are strongly associated with perceptions of workplace morale. Indeed, employees with deficits in the areas of communication and psychological attachment are especially likely to agree or strongly agree that morale is low in their workplace. Moreover, employees who have a job quality deficit in three or more areas are more than three times as likely to say that morale is low in their workplace compared with employees who have no job quality deficits. Finally, job quality deficits are associated with absenteeism, as the shares of employees who were absent for three or more days during the year (the median number of sick days among this group) are about 5 to 15 percentage points larger among those with deficits compared to those without.

Put simply, discrepancies between actual and desired job features have important consequences for individuals and their workplaces. Individuals with larger job quality deficits are far more likely to look for another job, to consider joining a union, to report lower levels of staff morale, and to have higher rates of absenteeism, and report lower levels of staff morale and job satisfaction.

In terms of gender differences, the direction and magnitude of change is fairly similar for women and men, except on two items. As Tables 7 and 8 show, the number of job quality deficits has a larger impact on men in terms of their likelihood to have looked for another job and their willingness to join a union. In contrast, there is little difference between women and men in terms of the impact on workplace morale and absenteeism. Again, it is important to underline the serious consequences of job quality deficits, both for women and men. In particular, as the number of job deficits rise, there is a dramatic impact for both sexes on job turnover, union interest, and workplace morale.

Table 7: Selected Outcomes Associated with Job Quality Deficits by Gender, Canada 2000

	Percent who looked for job with another firm in past year		Percent non-union workers somewhat or very likely to want to join union	
	Men	Women	Men	Women
Psychological attachment				
No deficit	25.1	24.0	16.6	22.5
Yes deficit	45.0	36.6	46.2	41.3
Extrinsic rewards				
No deficit	22.9	22.0	12.4	19.2
Yes deficit	47.9	37.5	46.5	41.4
Communication				
No deficit	27.4	25.3	20.7	26.1
Yes deficit	46.0	39.7	42.1	33.3
Intrinsic rewards				
No deficit	26.5	23.8	19.2	25.5
Yes deficit	51.7	49.3	53.8	37.0
Flexibility/Work-Life Balance				
No deficit	26.8	25.6	16.2	24.9
Yes deficit	36.1	30.8	37.7	31.2
# of Job Quality Deficits				
0	21.4	22.1	9.5	18.0
1	27.1	18.7	23.4	27.7
2	35.1	34.6	39.0	33.3
3-5	52.9	45.1	54.7	44.2

Source: CPRN-Ekos Changing Employment Relationship Survey, 2000. Paid employees only (n=2118)

Table 8: Selected Outcomes Associated with Job Quality Deficits, by Gender, Canada 2000

	Percent 'agree' or 'strongly agree' that morale is low in the workplace		Percent who were absent for 3 or more days in past year due to personal illness	
	Men	Women	Men	Women
Psychological attachment				
No deficit	22.7	21.4	33.9	39.5
Yes deficit	59.7	61.3	44.0	45.9
Extrinsic rewards				
No deficit	26.9	27.3	35.6	39.5
Yes deficit	46.4	42.3	38.8	46.0
Communication				
No deficit	26.0	26.2	34.7	39.0
Yes deficit	73.7	67.1	46.4	52.1
Intrinsic rewards				
No deficit	27.6	29.6	33.9	40.0
Yes deficit	58.7	48.9	50.0	46.1
Flexibility/Work-Life Balance				
No deficit	26.9	25.0	34.1	38.9
Yes deficit	41.9	44.1	40.4	44.3
# of Job Quality Deficits				
0	18.7	17.0	30.5	37.0
1	25.6	27.8	38.7	38.7
2	47.4	40.3	39.7	46.5
3-5	64.9	64.1	45.7	47.5

Source: CPRN-Ekos Changing Employment Relationships Survey, 2000.

Conclusion

To summarize, this section documents the deficits created when actual job features in the workplace fall short of the desired work experience. Overall, the most common shortfalls are in the area of work-family balance and flexibility, followed by psychological attachment and extrinsic rewards. Deficits in communication and intrinsic interest are important, but are experienced by smaller numbers of workers.

Women are more likely than men to report job deficits on work-family balance, psychological attachment, communication and extrinsic rewards. Job quality deficits are more common in large, unionized workplaces, and in organizations where downsizing has taken place.

Discrepancies bring with them many consequences. They raise the likelihood of job turnover, poor workplace morale, and to a much lesser extent absenteeism. They are also associated with a greater willingness to join a union. While there is a cumulative effect to experiencing multiple discrepancies, it is also clear that discrepancies on different items bring somewhat different outcomes – something employers and policy makers will need to take into account in fashioning effective human resources strategies and responses. For example, where low workplace morale is a problem, employers would usefully focus on improving communication and psychological attachment in the workplace, given that these two factors have the greatest impact on workplace morale. In contrast, organizations facing problems with high job turnover may need to enhance intrinsic rewards by offering more interesting work and skill development opportunities.

Section 5: Information Technology and Job Quality

Our portrait of job quality at the start of the 21st century has highlighted several points of convergence and divergence among women and men. On one hand, women place different emphasis than do men on key dimensions of jobs, such as work-family balance and workplace relations. Yet women are just as likely as men to be in high quality jobs. Nonetheless, even though knowledge workers (those with university degrees) on the whole have substantially better quality jobs than do other workers, women have larger job quality deficits. These deficits exist with respect to the economic rewards of their jobs, as well as work-family balance, communications and employment relationships.

At this point, we believe it is necessary to add another layer to our analysis: information technology. Missing so far from the discussion of how men and women experience the quality of their jobs is the impact of the information technology revolution. Surely this distinguishing feature of the new economy lies behind some of the trends documented in earlier sections. But how?

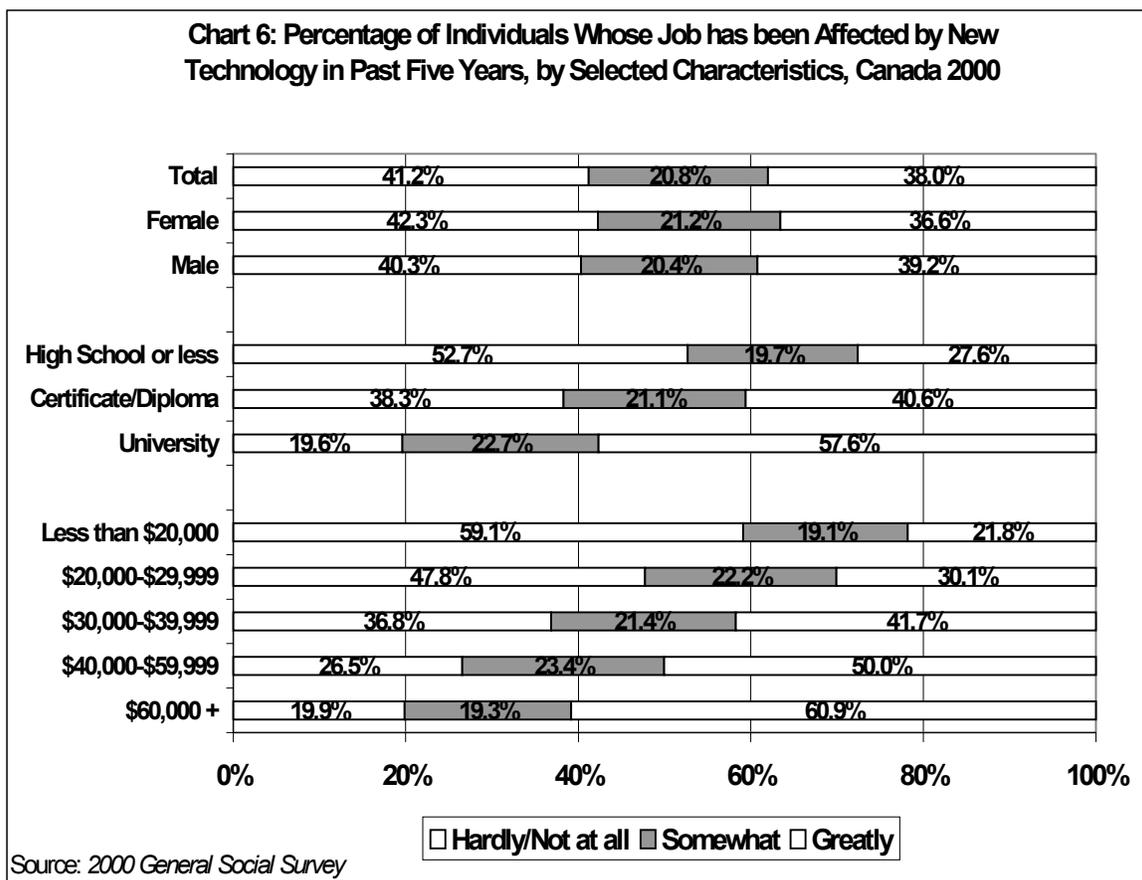
The surest way to answer this question would be to use data that includes measures of information technology's effects on the five job quality dimensions examined in Sections 2, 3 and 4, namely psychological attachment, intrinsic and extrinsic rewards, communications, and work-family balance and flexibility. However, no such Canadian data exist. So we rely on the next best thing, which is Statistics Canada's *2000 General Social Survey* (see Box 2 on page 10 for survey details). This survey is the most comprehensive to date on the extent and nature of work-related computer use and the impact of information technology on three important job quality indicators: workload, skill development, and job security.

The IT Revolution in Canadian Workplaces

Our focus on gender differences in how information technology (IT) affects job quality in these ways adds to on-going debates about the so-called 'digital divide' (OECD, 2001). The focus of this debate is the growing inequality in access to computer technology and how this could affect an individual's economic and social opportunities. Because Canada is fast becoming an information society and IT access and use are basic resources, the digital divide has important implications for social policy.

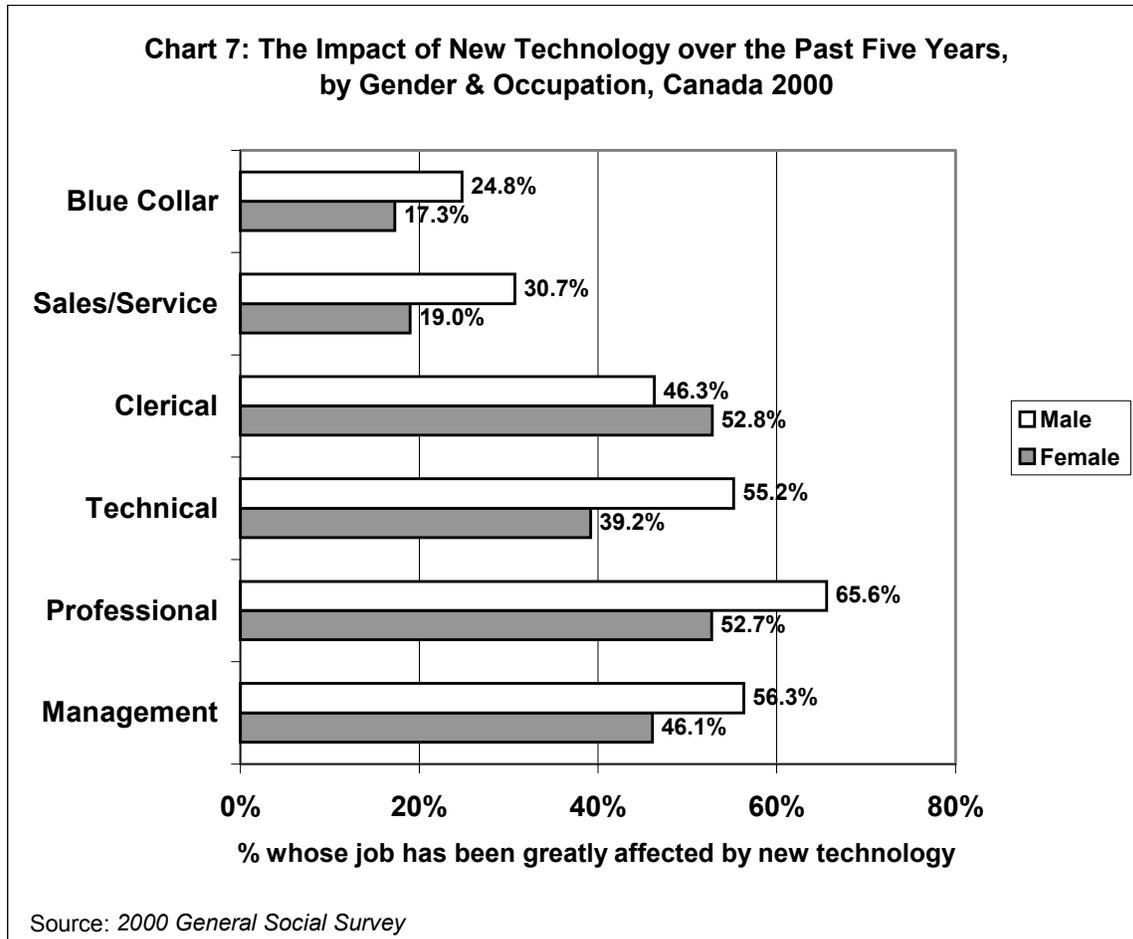
As a starting point, Chart 6 reports the diffusion of workplace information technology between 1995 and 2000 in Canada. According to the *2000 General Social Survey*, 38 percent of employed individuals say new computers or automated technology 'greatly' affected their jobs over this period, while another 21 percent say that their jobs were 'somewhat' affected. This vigorous pace of IT change has been sustained since the 1980s, for as the 1989 *General Social Survey* found, 29 percent of workers had been greatly affected and 15 percent somewhat affected by the introduction of information technology in the 1984-89 period (Lowe, 1992: 99). Furthermore, university graduates are about twice as likely as persons with high school or less to say that their jobs were greatly affected by new technologies (58 versus 28 percent). And high-income earners (\$60,000 or more) are about three times as likely as low-income workers (under \$20,000) to say their jobs have been greatly affected.

Still, large proportions (about 40 to 50 percent) of individuals with lower levels of educational attainment or personal income report that their jobs have been somewhat or greatly affected by technological change. This lends support to public perceptions that rapid technological change is transforming workplaces and society in general. Even so, there is little doubt that knowledge workers are at the center of the IR revolution with a persistent ‘digital divide’ in Canada’s workplaces.



While at an aggregate level, there is little difference in the shares of women and men who report that IT has greatly affected their jobs, this masks substantial gender differences within specific occupations. As shown in Chart 7, the share of women in technical occupations who report that new technology has ‘greatly’ affected their job is 16 percentage points smaller than among men in those occupations. Likewise, within managerial, professional, and sales and service occupations, women are far less likely than men to say that their jobs have been greatly affected by new technology. It is only in clerical occupations – traditionally the largest female-dominated area of employment – where women are more likely than men to say that technology has had a large impact. One possible reason for these gender differences is that the introduction of computer technologies has re-shaped how administrative tasks get done in the workplace. Rather than relying on a ‘secretarial pool’, many employees now do their own word processing, filing, and document retrieval using computer technologies. For many men, this has likely involved learning new skills – such as typing and document management – which in turn has created a

sense that their work has been greatly affected. For women, word processing, filing and other administrative tasks may seem like ‘business as usual’ given the types of jobs in which they have traditionally been employed, and consequently the changes associated with new information technologies may seem far less significant.



In spite of the relatively large proportion of individuals who say their work has been affected by new technologies, the everyday incidence of computer use on the job is lower than we might expect. Table 9 shows how often employed women and men used computers, e-mail, and the Internet at work (for work-related purposes) over the previous month. Approximately one-half of women and men rarely or never use a computer (about 45 to 50 percent), while less than half use a computer at work everyday (43 to 46 percent). The middle group of workers who use computers ‘sometimes’ (i.e., several times a week or a few times a month) is less than 10 percent. Thus, computer use seems to be ‘all or nothing’, with individuals either using computers on a daily basis, or hardly ever. Regarding e-mail and Internet use, less than 20 percent of Canadian workers use these technologies on a daily basis at work. In this respect, the IT revolution still has a way to go before it draws in the majority of workers.

Table 9: Frequency of Computer Technology Use in the Workplace in the Previous Month, by Gender, Canada 2000

In past month at work, how often did you use a ...	Never/Rarely	Sometimes	Everyday	Total
Computer				
Total	47.9	8.1	44.0	100.0%
Men	50.0	7.5	42.5	100.0%
Women	45.4	8.7	45.8	100.0%
E-mail				
Total	68.8	13.0	18.2	100.0%
Men	67.6	13.3	19.0	100.0%
Women	70.3	12.6	17.2	100.0%
Internet				
Total	71.8	13.8	14.4	100.0%
Men	70.4	13.1	16.4	100.0%
Women	73.5	14.6	11.9	100.0%

Source: 2000 General Social Survey

To gauge the overall intensity of computer usage in workplaces, the three types of uses in Table 9 have been combined into a single measure. This allows us to identify ‘high intensity’ or regular users of computers, e-mail and the Internet, ‘moderate intensity’ users who sometimes use applications, and ‘low intensity’ users who use this technology rarely or not at all. Based on our criteria, one-quarter of workers in Canada are ‘high intensity users’ of computer technology at work. These individuals use computers, e-mail and/or the Internet on a regular basis. Another 29 percent of workers are ‘moderate intensity’ users of computer technology on the job, while the remaining 45 percent are ‘low intensity’ users. Overall, a small majority of Canadian workers are now moderate or high intensity users of computer technology at work (Table 10).

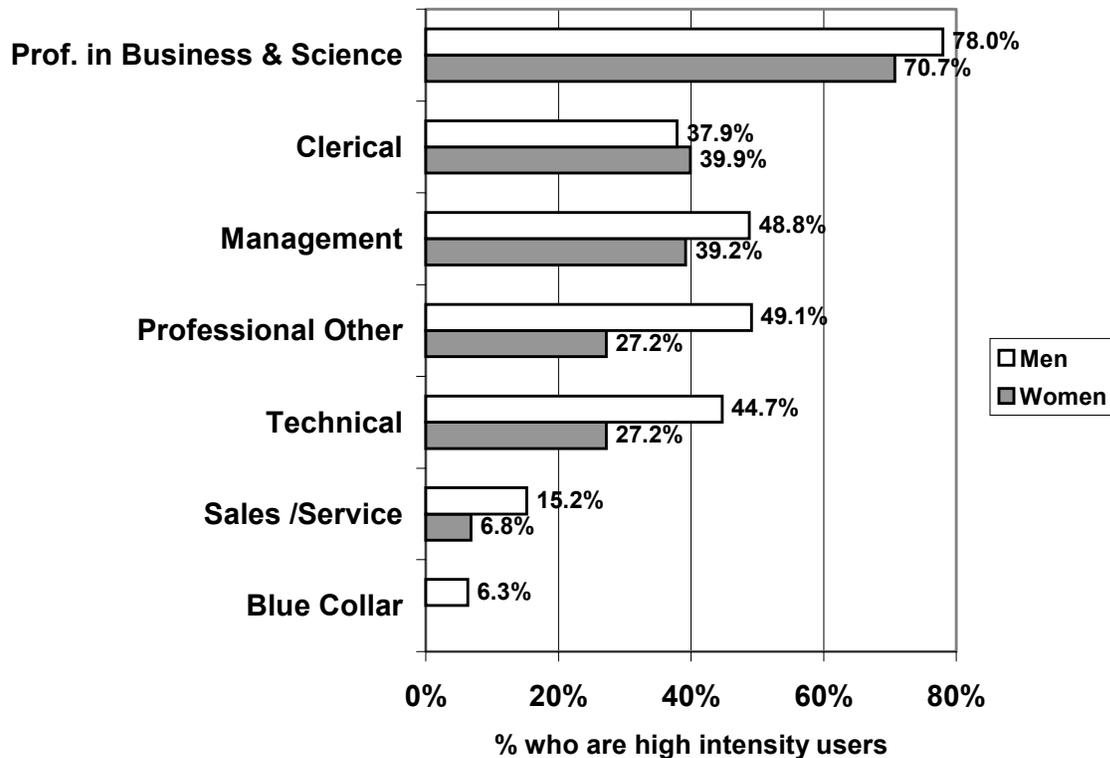
Table 10: Frequency of Computer Technology Use in the Workplace in the Previous Month, by Gender, Canada 2000

	Low Intensity	Moderate Intensity	High Intensity	Total
Men	47.1	26.1	26.8	100.0%
Women	42.6	33.2	24.2	100.0%
Total	45.1	29.3	25.6	100.0%

Source: 2000 General Social Survey

Again, gender differences in the intensity of use are evident when specific occupational groups are considered. As shown in Chart 8, within all occupational groups except clerical positions, women are less likely than men to be high intensity IT users. This gender difference is most evident in professional occupations outside of business and science (at 22 percentage points) and in technical occupations (at 18 percentage points). The gap is around 10 percentage points amongst managers and in sales and service occupations, while it is 7 percentage points among professionals in business and science.

Chart 8: Percentage of Workers who are High Intensity Users of Computer Technology, by Gender and Occupation, Canada 2000



Source: 2000 General Social Survey

To better understand what underlies the gender gaps reported in Chart 8, we looked at other factors that could explain variations in the work experiences of women and men. For example, female managers may be more likely than their male counterparts to be employed in sectors such as retail trade or food and accommodation services, where computer technology may not be used as intensively on a daily basis. To take such factors into account, a multivariate statistical model was used to isolate the relationship between gender and intensity of computer use within occupations, taking into account the effects of age (a proxy for experience), education, industry sector and self-employment status. The results of the analyses are presented in Appendix Tables 4a through 4g. The results confirm that after ‘controlling’ for these other factors, being female is still associated with a lower likelihood of high intensity computer technology use within most occupational groups – clerical and blue collar occupations being the only exceptions. This suggests that within these broad occupational groups, the divergent IT use patterns are not due to industry characteristics or workers’ human-capital. We can only surmise that the reasons men work more intensively with IT than women has to do with workplace factors. Investigating such factors would require more detailed information on workplaces than is available on the *2000 General Social Survey* (such as firm size, organizational priorities or more detailed occupational categories) or information gathered through organizational case studies.

Information technology is a driving force in the emerging knowledge-based economy. In the leading ‘knowledge-worker’ jobs – management, the professions and technical fields – men are ahead of women when it comes to having extensive IT use as part of their job. This is a key finding that deserves further investigation. More relevant for our purposes are the consequences of new information technologies for Canadian workers. There is no consensus on this issue. While some commentators believe that new technologies have contributed to job loss and the deskilling of jobs, others contend that the net effect of technological change has been largely positive, increasing job opportunities and job security, while also creating more highly skilled work (see Gallie, 1994; Hughes and Lowe, 2000; McMullen, 1996; Lafleur and Lok, 1997). Gender issues have been central to these debates, raising questions about whether women and men are experiencing similar or different outcomes as a result of technological change (Gallie, 1996; Hughes, 1996; Webster, 1996). This section offers an empirical-grounded assessment of how IT affects the quality of working life in Canada.

Gauging the Intensity of Computer Use

Impact of IT on Workload

These use patterns matter because of the potential impact of IT on working conditions. So we will now consider the link between technological change and job quality. Specifically, is the intensity of computer use associated with either positive or negative outcomes for job quality? The answer to both questions is ‘yes’. As shown below, intensity of computer usage is positively associated with perceptions of both skill development and job security, but is also associated with increased workload and the potential for work-family conflict. Moreover, there are important differences in the extent to which women and men experience these outcomes.

Long hours and heavy workloads are increasingly common features in Canadian workplaces. In a recent report published by Canadian Policy Research Networks, Duxbury and Higgins report that the share of employees doing supplemental work at home in the evenings or on their days off increased from 31 to 52 percent between 1991 and 2000. Similarly, the share reporting high role overload (i.e., trouble balancing the competing demands of work, children, eldercare and other commitments) increased from 47 to 59 percent over this period (Duxbury and Higgins, 2001).

Many factors underlie this trend. Undoubtedly influential are employer expectations for improved ‘results’ and doing ‘more with less’. Feelings of financial and job insecurity among workers may also have motivated them to work harder. The role played by IT is yet another consideration, as home computers and laptops make it possible to access e-mail, client files or other work materials from outside the office. While for some people this may increase job flexibility and work options (such as telecommuting), for others it may simply make it more difficult to leave work behind at the end of the day.

The *General Social Survey* provides a unique opportunity to explore whether IT use is related to workload and reduced quality of work life. Overall, the evidence indicates that high intensity users of computer technology are more likely than other workers to experience stress or worry due to workload and to take their work home with them. As Table 11 shows, the share of workers who say that too many demands or hours of work cause them excess stress or worry increases from 28 percent among low intensity users of computer technologies to 49 percent

among high intensity users. Similar patterns are evident when use of home computers for work-related purposes are considered.

However, these workload variations might not result from the intensity of computer use per se, but be related to other factors, such as occupation. For example, we know that managers tend to work long hours and to be high intensity users of computer technologies, so it is necessary to take a closer look within occupations. Yet even at this level of detail, we find a striking relationship between workload and intensity of computer use on the job (Table 11). For example, among managers, the shares of high intensity users reporting that job demands and work hours cause them excess stress or worry is 10 percentage points higher than among low intensity users. High intensity users are also more likely to use a home computer for work-related purposes (a difference of 40 percentage points among managers). Similar patterns are evident within other occupational groups. What makes these findings even more striking is that the majority of individuals who use a home computer for work are not telecommuters (i.e., working some of their usually scheduled hours at home), so Table 11 is reporting hours worked over and above a regular schedule. In summary, the economic advantages of knowledge work must be weighed against these costs and trade-offs.

Intensive IT use is a source of job stress for both women and men. Close to half of both women and men who are high intensity computer users report that too many demands or hours of work cause them excess stress and worry, while this is the case for about 30 percent of women and men who are low-intensity users. When it comes to stress, the impact of the IT revolution has been gender-blind. It should be noted, however, that women appear to be less likely than men to use a home computer for work-related purposes, although gender differences vary considerably across occupational groups.

This link between the intensity of computer use and job demands deserves serious consideration from employers, unions and employees. Duxbury and Higgins (2001) found that employees experiencing high levels of role overload and work-family conflict tend to be less committed to their employer, less satisfied with their jobs, more likely to report job stress, more likely to be absent from work, and more likely to consider quitting their job than other employees. Negative impacts on home and family life are also documented. These negative effects can only spread as IT becomes an even more integral part of Canadian workplaces and more employees become frequent users. What we are documenting are the hidden costs and unintended consequences of the IT revolution. Images of a 'leisure society' created through the labour-saving potential of technology seem more utopian today than when first proposed in the 1960s and 1970s (Lowe, 2000). The future challenge will be to find ways of enabling employees to use technology to reduce workloads and increase flexibility and choice in their work lives.

Table 11: Selected Measures of Workload by Intensity of Computer Use, Gender and Occupation, Canada, 2000

	% with too many demands or hours of work causing excess stress or worry			% using home computer for work-related purposes in past month		
	Total	Women	Men	Total	Women	Men
Total	36.6	37.5	35.9	50.6	52.4	49.1
Low intensity	28.4	30.2	27.0	36.0	39.7	33.3
Moderate intensity	38.1	37.8	38.3	62.4	60.2	64.8
High intensity	49.2	49.6	49.0	71.5	68.5	74.4
Managers – All	48.7	47.7	49.2	55.5	52.4	57.5
Low intensity	42.5	41.2	43.4	33.4	37.1	31.0
Moderate intensity	48.6	43.4	51.7	56.8	52.2	60.1
High intensity	52.0	55.9	50.4	73.3	66.6	77.1
Professionals in Business & Sciences – All	49.9	48.5	50.5	72.8	67.6	75.9
Low intensity	37.7	na	na	49.6	na	na
Moderate intensity	39.4	na	40.6	69.6	na	79.8
High intensity	53.3	53.7	53.2	76.0	72.3	78.0
Other Professionals – All	50.6	53.9	45.0	58.6	60.1	55.4
Low intensity	42.8	46.0	na	41.8	46.1	na
Moderate intensity	54.6	57.5	47.7	62.8	63.7	60.3
High intensity	51.0	55.5	46.9	71.4	73.6	68.5
Technical – All	37.4	38.8	36.4	64.1	62.4	65.6
Low intensity	29.7	35.3	na	48.2	47.3	49.2
Moderate intensity	35.1	36.5	33.7	72.1	71.0	73.1
High intensity	45.7	46.6	45.2	73.5	74.0	73.1
Clerical – All	36.9	36.3	38.6	60.0	59.0	62.8
Low intensity	31.6	30.9	32.6	39.6	36.8	43.1
Moderate intensity	31.3	30.0	35.7	62.1	59.5	71.0
High intensity	45.4	45.4	45.6	68.4	67.2	72.2

Source: 2000 General Social Survey

Impact of IT on Intrinsic Rewards

Even though high intensity computer use may bring increased workloads and job demands, it also may have a positive impact in other areas of job quality. High intensity users are more likely to report having learned new skills and to feel their work has become more interesting as a result of technological change – two indicators of intrinsic work rewards that we used in Sections 2 and 3. Table 12 reports that 15 percent of Canadian workers learned new computer skills over the preceding year as a result of software or hardware upgrades. This was true for one-third of high-intensity computer users, with men slightly more likely than women to say this was so (36 and 30 percent respectively).

Table 12: Skill Development, by Intensity of Computer Use, Canada 2000

	percent who did not have computer upgrade this year	percent with computer upgrade that ...		Total
		Did not result in learning new skills	Resulted in learning new skills	
Total	60.8	24.7	14.5	100.0%
Low intensity	95.5	2.6	na	100.0%
Moderate intensity	43.4	37.5	19.1	100.0%
High intensity	17.9	48.7	33.4	100.0%
Men	60.6	24.5	14.9	100.0%
Low intensity	97.2	na	na	100.0%
Moderate intensity	41.8	39.4	18.8	100.0%
High intensity	14.7	49.1	36.2	100.0%
Women	61.1	24.8	14.1	100.0%
Low intensity	95.6	Na	Na	100.0%
Moderate intensity	45.0	35.7	19.4	100.0%
High intensity	22.3	48.2	29.5	100.0%

Source: 2000 General Social Survey

The GSS also asked respondents: “Considering your experience, education and training, do you feel overqualified for your job?” This measures skill utilization, which is a prerequisite in a knowledge-based economy that places a premium on human capital. Looking at Table 13, we see that perceptions of overqualification decline as the intensity of computer use increases. This pattern is found in the workforce as a whole, among university-educated workers, and for women and men in both groups. For most workers, intensive computer is accompanied by a good fit between their skills and the requirements of their job.

Table 13: Percent of Workers Who Feel Overqualified for their Job, by Selected Characteristics, Canada, 2000

	Total	Men	Women
Total	23.4	23.6	23.2
Low Intensity	26.4	25.8	27.2
Moderate Intensity	22.9	24.1	21.7
High Intensity	19.1	19.5	18.4
University educated workers	25.3	25.1	25.5
Low Intensity	32.3	34.8	30.0
Moderate Intensity	28.7	31.8	26.2
High Intensity	21.1	20.2	22.8

Source: 2000 General Social Survey

The use of IT also enhances the intrinsic rewards of work, which makes sense considering that technology contributes to skill development and use. One-third of all Canadian workers (34 percent) say their job became more interesting over the previous five years as a result of the

introduction of new computers or automated technology. Identical proportions of women and men report this to be the case. The positive impacts of technology are most prevalent among high-intensity computer users, with almost two-thirds of both women and men in this group saying their work became more interesting because of technological change.

The impact of new technologies on the job content of women and men has been a central issue in debates over technological change. At issue is whether women are more likely than men to experience ‘deskilling’. When we examined specific occupational groups, there was no clear evidence of this (results not reported). In managerial occupations, professional occupations in business and science, technical occupations, and sales/service occupations, slightly smaller percentages of women than men report that they learned new skills in the past year as a result of computer upgrades. However, there are no consistent differences in the extent to which women and men in various occupations perceive that their jobs became more interesting over the past five years as a result of technological change. If ‘deskilling’ had been more prevalent among women than men, one would expect women to have less favourable assessments of the intrinsic job rewards. But this is not the case.

Impact of IT on Job Security

Job security is also at the center of debates over information technology. Specifically, have Canadian workers become more vulnerable to job loss as a result of technological change? When asked about the impact that new technologies have had on their job over the past five years, 41 percent of Canadians say their jobs have not been affected by technological change with no impact on job security. A comparable share (40 percent) say their jobs have been somewhat or greatly affected by technological change, but with no effect on job security. Hence, for the vast majority of Canadian workers (81 percent), the introduction of new computers or automated technologies has made no difference to their job security. For the rest, technological change was generally perceived to have a positive effect on job security (14 percent), while a much smaller proportion (5 percent) reported negative effects.

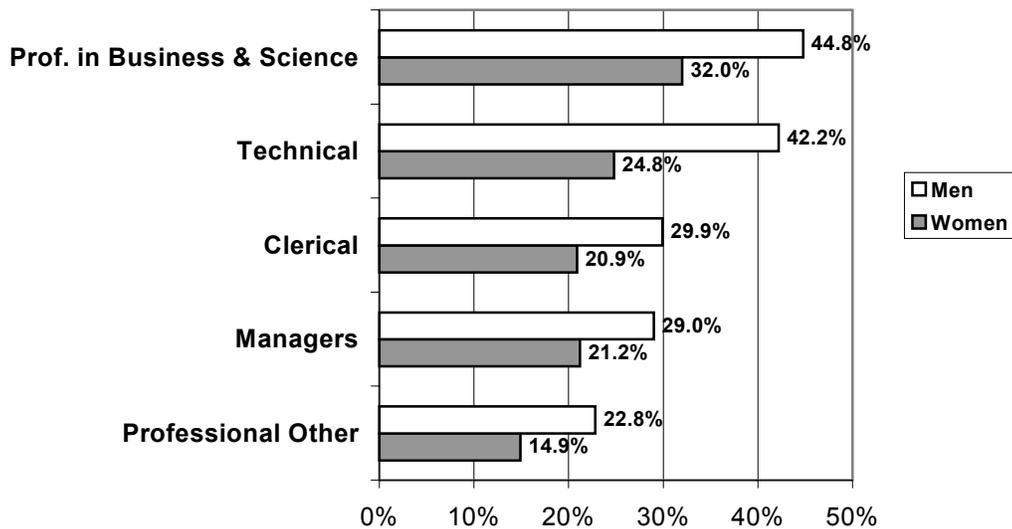
The positive effects of technological change on job security are most widely reported among high-intensity users of computer technologies (Table 14). Indeed, 28 percent of these individuals report that their job security increased as a result of technological change, although such a positive assessment is far more prevalent among men than women in this group (33 and 22 percent respectively). We can only speculate on the reasons for this. One possible interpretation is that the contributions of IT to skill development fortify a worker’s employability, making it easier for them to find comparable work should they lose their present job. Yet this does not explain why high-intensity male IT users would be more likely than comparable females to report increased job security. These issues deserve further research.

Table 14: The Impact of New Computers or Automated Technology on Job Security, by Gender and Intensity of Computer Use, Canada 2000

	Job hardly or not at all affected	Job somewhat or greatly affected by technology in the past five years, and as a result, job security ...			
		Decreased	Stayed the same	Increased	Total
Total	41.3	5.1	39.9	13.8	100.0%
Low intensity	68.9	3.4	22.5	5.2	100.0%
Moderate intensity	25.9	7.0	53.2	13.9	100.0%
High intensity	11.4	5.7	54.5	28.3	100.0%
Men	40.4	5.3	38.0	16.3	100.0%
Low intensity	66.6	4.1	22.7	6.6	100.0%
Moderate intensity	24.9	7.3	51.6	16.2	100.0%
High intensity	10.4	5.4	51.0	33.2	100.0%
Women	42.3	4.8	42.2	10.6	100.0%
Low intensity	72.1	2.5	22.2	na	100.0%
Moderate intensity	26.8	6.7	54.8	11.6	100.0%
High intensity	12.7	6.2	59.4	21.7	100.0%

Source: 2000 General Social Survey

Chart 9: High Intensity Computer Users: Percent of Women and Men Who Say their Job Security has Increased in Past Five Years because of New Computers or Automated Technology, by Occupation, Canada 2000



Source: 2000 General Social Survey

The greater detail provided in Chart 9 shows sizeable, consistent female-male differences in the perceived impacts of technology on job security within all occupational groups. Among high-intensity computer users, differences between the sexes range from 8 percentage points among managers to 17 percentage points among technical workers. This adds a new twist to our earlier finding that pessimistic forecasts concerning IT undermining job security are not warranted. For most Canadian workers affected by technological change, job security is far more likely to have increased or stayed the same, rather than to have been adversely affected. However, even though high intensity computer users are the ones who most perceive greater job security, this ‘IT advantage’ accrues more to men than to women.

Conclusion

To summarize, the major story behind IT diffusion in Canadian workplaces is not about gender differences, but rather about pervasive positive and negative impacts of its introduction and use. The lack of gender differences associated with the IT revolution in workplaces mirrors the finding in Section 3 that job quality differences between women and men are minor. Still, when we look at the workers whose jobs require intensive use of IT, this is a predominantly male group, particularly in knowledge occupations. While at this finer level of detail the IT revolution has been experienced differently by women than men, we are unable to offer convincing explanations of why this is the case. So we want to flag this as a priority issue for further research.

Furthermore, contrary to claims that IT results in deskilling, the General Social Survey data show the opposite. Computers have contributed to skill use and development in the workplace, although we need more details than the General Social Survey can provide on the kinds of skills that IT promotes. Still, these findings signal how IT could be contributing to productivity gains for the economy overall. And viewed in the context of public policy objectives, workplace technological change directly contributes to life-long learning. In this respect, employers who make continuous investments in IT will have good potential to become ‘learning organizations’.

The intrinsic side of jobs also is enhanced by how IT is associated with more interesting work. All this bodes well for the future of the knowledge economy, given the leading role new technologies will continue to play in Canadian workplaces. As well, the diffusion of workplace IT is not eroding job security; for a small group of mainly male workers it is strengthening it. It is worth underscoring that job security is the only outcome of technological change we examined that showed notable gender differences.

We also documented a darker side to IT. Intensive IT users are more likely to be stressed out, enduring heavy workloads and long hours. An important issue for future research is determining at what point these negative effects undercut IT’s positive contributions to learning and productivity. In short, the information technology revolution is double-edged. The challenge for employers is to find ways of maximizing the positive impacts of IT on skill and intrinsic work rewards while minimizing the negative impacts. This strategy stands to equally benefit organizations and employees.

Section 6: Implications for Workers, Employers and Public Policy

Despite much debate and commentary on the emerging knowledge economy in Canada and other industrialized countries, there has been little in-depth analysis of how gender issues are playing out in the process of economic and workplace change. Women's experiences on the job are usually examined using a limited range of measures and scant attention has been paid to the expectations that women and men bring to the workplace. The purpose of this report has been to provide new evidence on what women and men want in a job and how they are experiencing the transition to a knowledge-based economy. Insights on these issues are of importance to individuals as they plan their careers, and to employers and policy makers as they set workplace policies.

The Labour Market Context

The Canadian economy, like the economies of other countries, is being reshaped by new technologies, the rapid pace of product innovation, global trading arrangements and new production processes. As information and ideas become central to the production process, education, skills and expertise become essential for individual success in the labour force. "By 2004, more than 70 percent of all new jobs created in Canada will require some form of post-secondary education, and 25 percent of new jobs will require a university degree" (Government of Canada, 2002).

By and large, Canadians have taken up this challenge. Canada leads industrialized countries in the share of the working age population with a completed post-secondary education (Riddell, 2002). Women account for much of this success, as they now comprise over half of all students enrolled in colleges and universities. Canadians are also adapting by learning new skills on the job, especially the skills associated with the implementation of new technologies.

The emergence of the knowledge-based economy also poses new challenges for employers. Human resource strategies and job designs are being transformed to provide skilled workers with the resources, autonomy and flexibility they need to be even more effective in their work. Employers also face a growing challenge finding the right people for some jobs. In some industries and occupations, the shift from a shortage of jobs to a shortage of qualified workers is already evident, placing issues of recruitment and retention at centre stage. As employers face increasing competition for talent in the years ahead, it will be all the more important for them to meet the expectations of current and potential employees – men and women – with respect to job quality.

Our research shows that, in many respects, women and men have different expectations of paid employment. These gender differences are most apparent among people with higher levels of educational attainment. To set the scene for that analysis, however, it is important to highlight one aspect of work that is highly valued by both women and men, regardless of education. This is the desire for interesting work (intrinsic rewards).

Most women and men express a desire for interesting work and a sense of accomplishment. People want to feel engaged in what they are doing. But one in seven employees in Canada say

that their job is less interesting and engaging than they would like. This ‘quality deficit’ has significant consequences for employers because of the impact on job turnover. Fully one-half of these workers also say that they looked for a job with another employer in the previous year. Workplace strategies – such as job rotation and task diversity – are one way to address the negative aspects of repetitive or monotonous work. Opportunities for skill development and advancement are another, assuming that the organization is large enough to provide avenues for promotion.

But other expectations of job quality vary more widely across levels of educational attainment. This means that we need to segment the labour force into two groups – individuals with post-secondary education and those without.

Expectations and Job Characteristics of People without Post-secondary Education

Most employed women in Canada who have high school or less are employed in sales, service and clerical occupations. They work in industries such as retail trade, food and accommodation, and other personal services. In contrast, most employed men with high school or less are employed in blue collar jobs, and, to a lesser extent, sales and service occupations.

Pay and Benefits

Both women and men with high school or less place a greater priority on job security, pay and benefits than individuals with higher levels of educational attainment (especially university degrees). Clearly, they are uncertain about their prospects for re-employment in the wake of a job loss, and are sensitive to issues of pay and benefits given the relatively small pool of good jobs available to them. One-third of men and almost 40 percent of women who have high school or less have a job quality deficit in the area of pay, benefits and security.

For employers who rely on a low-wage, high turnover employment strategy, such dissatisfaction is unlikely to be a concern. But for those who rely on high school graduates for at least a portion of their core workforce, pay, benefits and security are important considerations in recruitment and retention strategies. These ‘bread and butter’ issues are also closely associated with the willingness of employees to join a union.

Communication

Women employees with high school or less also place a higher value on good communication and collegial workplace relations than their male counterparts. By its very nature, work is a social activity, requiring informal interaction between co-workers, more formal communication between management and staff, and interactions with customers or clientele. Our study did not differentiate between these different types of communication, but given the high value placed on communications-related issues, it would appear that all are important. For about one-in-seven women and men with high school or less, the quality of communication in their workplace falls short of their expectations. Again, this has important implications for employers, as the vast majority of employees with a job quality deficit in this area report that morale in their workplace

is low. One obvious implication is that employers struggling to improve morale in the workplace would be well advised to improve channels of communication.

Employees with high school or less are unlikely to work in managerial and professional occupations and consequently may find themselves 'out of the loop' when it comes to organizational information. Efforts to keep them in the loop are thus important, especially given the value they place on high quality communication. Such an emphasis is all the more important in workplaces that employ large numbers of women. Other strategies could include the following: mechanisms for sharing information on corporate priorities and performance; ensuring that managers are visible and available to staff on the shop or office floor to answer questions and hear concerns; established procedures for the employee review process, including employee evaluations, one-on-one meetings and perhaps 360° feedback; and finally, in larger organizations, electronic posting of job vacancies provides an effective means to disseminate information to staff regarding prospects for promotion and career advancement.

Flexibility

Women with high school or less (like other women) are more likely than their male counterparts to place greater value on flexibility and the ability to balance work and family. This is not surprising given that the number of hours worked by two-parent families has increased dramatically over the past two decades. Human resource strategies can help employees meet their personal and family obligations. This could involve reasonable employer expectations regarding work hours and job demands, the ability of employees to refuse overtime hours without consequence, and front-line managers and supervisors who are aware of and supportive of work-life balance issues. Organizational policies that offer flexible schedules and family leave entitlements that enable employees to move between full-time and part-time staffing arrangements as their family responsibilities shift over the life course are further considerations. Research by Duxbury and Higgins shows that work-life conflict has negative consequences for employers, including lower levels of employee commitment and job satisfaction and higher levels of turnover, absenteeism and stress (Duxbury and Higgins, 2001).

Employers who rely on employees with high school or less should pay particular attention to pay, benefits and security, given the importance that are attached to these 'bread and butter' issues. Strategies for ensure effective two-way communications with non-managerial staff are also key considerations, as are strategies enabling employees to balance their paid employment with their responsibilities outside of the workplace.

Expectations and Job Characteristics of Highly Educated Employees

The differences in workplace values between women and men are most evident for well-educated employees. University graduates are largely employed in managerial and professional occupations. Women in these occupations are most often employed in health, education and social services, and in financial and managerial services, while men are employed in these same industries as well as manufacturing.

Compared with their male counterparts, women are more likely to place a high value on respect and commitment in the employer-employee relationship, and to place a high value on communication and workplace relations. The importance that women attach to commitment and workplace relations suggests a desire for stable employment relationships, which calls into question the notion of employees as foot-loose 'free agents'. In contrast, university educated men seem to place far less value on these 'softer' aspects of work life, and may be the one group that fits the 'free agent' image of a knowledge worker.

While university-educated women have high expectations regarding people-supportive workplace practices, these expectations are not being met. For example, one-third of female graduates have a job quality deficit in the area of work-family balance and flexibility, one-quarter have a job quality deficit in the area of commitment and respect, and one-in-seven have a job quality deficit in the area of communication. In addition, one quarter of women graduates have a job quality deficit in the area of pay, benefits, security and opportunity for advancement. These deficit rates are higher than those reported by men.

Employers who rely on well-educated women as a source of labour must pay more attention to meeting these expectations. Effective communication, family friendly workplace policies and opportunities for advancement are key considerations.

Impacts of Information Technologies

Over one-half of employed Canadians are now moderate or high intensity users of computers in the workplace. These people work in a fairly wide range of occupational and educational categories – about one-third of high intensity computer users are located in professional occupations, while one-fifth are in clerical jobs. Women account for 42 percent of high-intensity computer users and 51 percent of moderate intensity users. About half of high intensity computer users have a university degree, and one quarter have high school or less. High intensity use of computers in the workplace brings with it both positive and negative outcomes, with women expressing most concerns about the negatives.

On the positive side, high technology use is associated with interesting work. It appears to enhance the interest and challenge of work for both women and men, and to be associated with greater utilization of employees' skills on the job. Intensive use of technology is generally viewed as having a neutral or positive effect on job security for men but less so for women.

On the negative side, high intensity computer use is linked to longer work hours, more intensified job demands, and spillover of work into the home. Bearing in mind that many Canadians already experience high levels of work-family conflict and the associated organizational and economic costs, it would seem prudent for employers to ensure that new technologies are not adding to such problems. The challenge is to use technology to reduce workloads and increase flexibility and choice in their work lives.

Overall, our analysis shows striking changes in the labour market role of educated women, but little change in the role of women with high school or less. A more technology-driven, knowledge-based economy brings new opportunities for women in managerial and professional

occupations. But we see the same concentrations of women with high school or less in the traditional sales, service, and clerical occupations. Thus, the growth of knowledge work and the information technology revolution have been levelers for some, but not for all.

But this is only half the story. Work experiences in knowledge sectors of the economy look very different to women than to men. Most notably, men are more likely than women to be intensive IT users, and men also come out ahead when it comes to positive benefits of IT on job security. Thus, the new economy appears so far to be a gendered economy. The women are not excluded, but their experiences are less positive than for men.

In closing, it is clear that pay, benefits, job security, and opportunities for advancement are valued by all workers. What is important for employers to consider in the years ahead, as skill shortages emerge, is that the key to retention and recruitment often lies in the quality of the work experience. Both men and women place a high value on interesting work, work/life balance, and pay, benefits, and security. Despite this common ground, there are significant differences, as women – especially educated women – place a higher value than men on stable working relationships with effective formal and informal communications.

Job quality has a direct and significant impact on job turnover, morale, and willingness to join a union. Understanding and responding to the expectations of employees will therefore make a real difference to the bottom line in the 21st century labour market.

APPENDIX TABLES

Appendix Tables 1A to 1E

Ordinary Least Squares (OLS) regression was used to measure the strength of the association between a range of independent variables and each of the Job Values Scales. Independent variables were entered into the regression model through a stepwise procedure. The demographic characteristics included gender, age, number of dependent children, visible minority status, full-time student status, educational attainment, and share of total household income contributed by the individual. Job characteristic variables included part-time job status, temporary job status and weekly earnings. Organizational context variables included industry, unionization and firm size. The values for each of the independent variables are shown below.

Gender	0 = men; 1 = women
Age	Range 16 to 84
Number of dependent children	Range 0 to 3
Visible minority status	0 = no; 1 = yes
Full-time student status	0 = no; 1 = yes
Educational attainment	Less than high school; high school (reference category; post-secondary certificate or diploma; Bachelor's degree; Master's degree or higher
Share of total household income contributed	Range 1 (less than 25%) to 4 (75% or more)
Part-time job status	0 = no; 1 = yes
Temporary job status	0 = no; 1 = yes
Weekly earnings	Range \$23.50 to \$4,327.00
Industry	Goods producing; distributive services; traditional services (reference category); dynamic services; non-market services; public administration
Unionization	0 = no; 1 = yes
Firm size	Less than 10 employees; 10 to 24 employees; 25 to 99 employees; 100 or more employees (reference category)

The regression results for the five Job Values Scales are provided below. Coefficients and standard errors are provided only for variables with significance levels of 0.05 level of confidence or better.

APPENDIX TABLE 1A. OLS REGRESSION RESULTS ON PSYCHOLOGICAL ATTACHMENT SCALE

	Unstandardized Coefficient	Standard Error	Standardized Coefficient	Significance
(Constant)	13.531	0.082		0.000
Female	0.455	0.084	0.138	0.000
Bachelor's Degree	-0.704	0.129	-0.150	0.000
Visible minority status	0.377	0.118	0.082	0.001
Full-time student status	-0.580	0.153	-0.097	0.000
Master's degree or higher	-0.506	0.158	-0.086	0.001
Certificate or diploma	-0.250	0.097	-0.073	0.010
Firm size less than 10	0.261	0.113	0.059	0.021

Adjusted R-Square = .054

APPENDIX TABLE 1B. OLS REGRESSION RESULTS ON COMMUNICATIONS SCALE

	Unstandardized Coefficient	Standard Error	Standardized Coefficient	Significance
(Constant)	13.682	0.098		0.000
Female	0.572	0.084	0.180	0.000
Bachelor's degree	-0.772	0.125	-0.172	0.000
Weekly earnings	0.000	0.000	-0.047	0.095
Certificate or diploma	-0.285	0.092	-0.086	0.002
Master's degree or higher	-0.385	0.157	-0.068	0.014

Adjusted R-Square = .067

APPENDIX TABLE 1C. OLS REGRESSION RESULTS ON EXTRINSIC REWARDS SCALE

	Unstandardized Coefficient	Standard Error	Standardized Coefficient	Significance
(Constant)	19.200	0.218		0.000
Master's degree or higher	-1.214	0.211	-0.160	0.000
Age	-0.030	0.005	-0.163	0.000
Unionization	0.373	0.121	0.082	0.002
Less than high school	0.534	0.217	0.067	0.014
Full-time student status	-0.853	0.214	-0.110	0.000
Bachelor's Degree	-0.872	0.173	-0.143	0.000
Certificate or diploma	-0.587	0.130	-0.131	0.000
Non-market services	0.353	0.151	0.064	0.020

Adjusted R-Square = .067

APPENDIX TABLE 1D. OLS REGRESSION RESULTS ON INTRINSIC REWARDS SCALE

	Unstandardized Coefficient	Standard Error	Standardized Coefficient	Significance
(Constant)	13.679	0.054		0.000
Female	0.348	0.078	0.118	0.000
Full-time student status	-0.399	0.138	-0.075	0.004
Non-market services	0.220	0.102	0.058	0.031
Master's degree or higher	0.281	0.137	0.054	0.040

Adjusted R-Square = .027

APPENDIX TABLE 1E. OLS REGRESSION RESULTS ON FLEXIBILITY/WORK-LIFE BALANCE SCALE

	Unstandardized Coefficient	Standard Error	Standardized Coefficient	Significance
(Constant)	8.281	0.055		0.000
Female	0.396	0.066	0.154	0.000
Number of dependent children	0.086	0.032	0.068	0.008
Bachelor's Degree	-0.231	0.094	-0.063	0.014
Distributive services	0.265	0.124	0.055	0.033

Adjusted R-Square = .032

Appendix Table 2. Percentage of Female and Male Employees Who Place High Value on Specific Job Characteristics, by Educational Attainment, Canada, 2000

INTRINSIC REWARDS

(% who score 9 or 10 out of ten)	<u>Men</u>	<u>Women</u>	<u>Difference</u>
High school or less	79.1%	82.7%	3.6%
Certificate or diploma	81.2%	85.7%	4.5%
University degree	77.9%	87.8%	9.9%
Total	79.4%	84.9%	5.5%

How important is work that is interesting?

(% who say 'very important')	<u>Men</u>	<u>Women</u>	<u>Difference</u>
High school or less	68.0%	69.6%	1.6%
Certificate or diploma	69.3%	76.5%	7.2%
University degree	71.9%	76.6%	4.7%
Total	69.3%	73.7%	4.4%

How important is work that gives you a feeling of accomplishment?

(% who say 'very important')	<u>Men</u>	<u>Women</u>	<u>Difference</u>
High school or less	69.9%	72.3%	2.4%
Certificate or diploma	66.4%	75.4%	9.0%
University degree	63.8%	75.7%	11.9%
Total	67.4%	74.2%	6.8%

How important is work that lets you develop your skills and abilities?

(% who say 'very important')	<u>Men</u>	<u>Women</u>	<u>Difference</u>
High school or less	66.9%	68.7%	1.8%
Certificate or diploma	60.1%	66.5%	6.4%
University degree	53.5%	67.3%	13.8%
Total	61.6%	67.6%	6.0%

COMMUNICATION

(% who score 9 or 10 out of ten)	<u>Men</u>	<u>Women</u>	<u>Difference</u>
High school or less	77.8%	87.1%	9.3%
Certificate or diploma	71.2%	82.4%	11.2%
University degree	58.1%	75.3%	17.2%
Total	71.1%	82.7%	11.6%

How important is work where the communication is good among the people with whom you work?

(% who say 'very important')	<u>Men</u>	<u>Women</u>	<u>Difference</u>
High school or less	71.2%	82.0%	10.8%
Certificate or diploma	65.3%	75.7%	10.4%
University degree	50.0%	68.5%	18.5%
Total	64.4%	76.7%	12.3%

How important is work where you receive recognition for work well done?

(% who say 'very important')	<u>Men</u>	<u>Women</u>	<u>Difference</u>
High school or less	57.6%	65.0%	7.4%
Certificate or diploma	42.8%	58.4%	15.6%
University degree	32.4%	50.5%	18.1%
Total	47.0%	59.3%	12.3%

How important is work where the people you work with are friendly and helpful?			
(% who say 'very important')	<u>Men</u>	<u>Women</u>	<u>Difference</u>
High school or less	67.9%	75.2%	7.3%
Certificate or diploma	59.4%	69.9%	10.5%
University degree	46.9%	57.7%	10.8%
Total	60.3%	69.4%	9.1%

PSYCHOLOGICAL

ATTACHMENT

(% who score 9 or 10 out of ten)	<u>Men</u>	<u>Women</u>	<u>Difference</u>
High school or less	75.3%	84.6%	9.3%
Certificate or diploma	71.7%	78.3%	6.6%
University degree	60.1%	74.3%	14.2%
Total	70.7%	80.1%	9.4%

How important is work where your employer has a strong sense of commitment to you?

(% who say 'very important')	<u>Men</u>	<u>Women</u>	<u>Difference</u>
High school or less	63.4%	68.2%	4.8%
Certificate or diploma	58.5%	62.3%	3.8%
University degree	44.0%	57.4%	13.4%
Total	57.3%	63.6%	6.3%

How important is work where you feel a strong sense of commitment to your employer?

(% who say 'very important')	<u>Men</u>	<u>Women</u>	<u>Difference</u>
High school or less	57.6%	62.2%	4.6%
Certificate or diploma	51.0%	54.7%	3.7%
University degree	33.7%	51.6%	17.9%
Total	50.0%	57.1%	7.1%

How important is work where the people you work for treat you with respect?

(% who say 'very important')	<u>Men</u>	<u>Women</u>	<u>Difference</u>
High school or less	73.8%	86.2%	12.4%
Certificate or diploma	68.3%	81.3%	13.0%
University degree	52.6%	70.9%	18.3%
Total	67.2%	81.0%	13.8%

EXTRINSIC REWARDS

(% who score 9 or 10 out of ten)	<u>Men</u>	<u>Women</u>	<u>Difference</u>
High school or less	79.0%	76.7%	-2.3%
Certificate or diploma	75.8%	73.4%	-2.4%
University degree	57.7%	70.4%	12.7%
Total	73.2%	74.1%	0.9%

How important is work that pays well?

(% who say 'very important')	<u>Men</u>	<u>Women</u>	<u>Difference</u>
High school or less	68.9%	66.0%	-2.9%
Certificate or diploma	58.7%	62.9%	4.2%
University degree	56.3%	55.2%	-1.1%
Total	62.7%	62.5%	-0.2%

How important is work that comes with good benefits?			
(% who say 'very important')	<u>Men</u>	<u>Women</u>	<u>Difference</u>
High school or less	63.6%	60.1%	-3.5%
Certificate or diploma	51.1%	55.3%	4.2%
University degree	42.7%	55.6%	12.9%
Total	54.7%	57.3%	2.6%

How important is work where your job security is good?			
(% who say 'very important')	<u>Men</u>	<u>Women</u>	<u>Difference</u>
High school or less	74.2%	74.9%	0.7%
Certificate or diploma	61.1%	68.1%	7.0%
University degree	38.7%	54.5%	15.8%
Total	61.8%	67.9%	6.1%

How important is work where the chances for career advancement are good?			
(% who say 'very important')	<u>Men</u>	<u>Women</u>	<u>Difference</u>
High school or less	60.7%	59.5%	-1.2%
Certificate or diploma	50.7%	47.0%	-3.7%
University degree	35.8%	46.8%	11.0%
Total	51.7%	52.1%	0.4%

FLEXIBILITY/WORK-LIFE

BALANCE			
(% who score 9 or 10 out of ten)	<u>Men</u>	<u>Women</u>	<u>Difference</u>
High school or less	52.0%	62.6%	10.6%
Certificate or diploma	45.7%	61.2%	15.5%
University degree	48.6%	56.3%	7.7%
Total	49.1%	60.7%	11.6%

How important is work that allows you to balance your work and family or personal life?			
(% who say 'very important')	<u>Men</u>	<u>Women</u>	<u>Difference</u>
High school or less	68.9%	77.4%	8.5%
Certificate or diploma	62.9%	75.4%	12.5%
University degree	60.9%	70.0%	9.1%
Total	65.1%	75.0%	9.9%

How important is work where you can choose your own schedule within established limits?			
(% who say 'very important')	<u>Men</u>	<u>Women</u>	<u>Difference</u>
High school or less	33.8%	38.0%	4.2%
Certificate or diploma	23.0%	30.4%	7.4%
University degree	26.4%	31.8%	5.4%
Total	28.6%	33.9%	5.3%

How important is work that allows you freedom to do your job?			
(% who say 'very important')	<u>Men</u>	<u>Women</u>	<u>Difference</u>
High school or less	65.2%	66.9%	1.7%
Certificate or diploma	58.4%	61.5%	3.1%
University degree	53.4%	62.6%	9.2%
Total	60.3%	64.0%	3.7%

Appendix Table 3. Percentage of Female and Male Employees Who ‘Strongly Agree’ With Statements Regarding Job quality, Canada, 2000

	Men	Women	Gender Gap
Your job is very hectic	28.5	39.0	10.5
The people you work with are friendly and helpful	28.6	39.0	10.4
I feel very committed to the kind of work I do in my job	27.1	37.2	10.1
It would be difficult for me to cope financially if I lost my job	29.8	39.4	9.6
Your employer treats you with respect	27.4	36.3	8.9
You have clear guidelines about what is required of you in your job	28.3	35.8	7.5
You have access to the information you need to do your job well	29.2	35.1	5.9
Your job is very stressful	22.7	28.5	5.8
Your job gives you a feeling of accomplishment	29.2	34.9	5.7
Your job lets you develop your skills and abilities	24.3	29.3	5.0
Communication is good among the people you work with	25.7	30.7	5.0
The work environment is healthy	14.3	19.2	4.9
You have a good relationships with your employer	28.2	32.9	4.7
Your job allows you to balance your work and family or personal life	18.0	22.6	4.6
I am proud to be working for my employer	17.7	22.3	4.6
You get the training needed to do your job effectively	18.9	23.1	4.2
You are free from conflicting demands that other people make	7.1	10.9	3.8
I have received the feedback I need to do my job well	13.7	17.5	3.8
It would be difficult for me to find another employer as good as my current one	11.0	14.7	3.7
I am willing to work harder than I have to in order to help my employer succeed	18.9	22.4	3.5
I trust my employer to treat me fairly	19.1	22.5	3.4
The work is interesting	26.3	29.6	3.3
I find that my values and employer’s values are similar	9.7	12.4	2.7
I am satisfied with my job	23.8	26.1	2.3
You receive recognition for work well done	19.5	21.8	2.3
The morale in your workplace is low	10.6	12.6	2.0
You can choose your own schedule within established limits	10.8	12.6	1.8
I have had difficulty keeping up with my workload	5.5	7.1	1.6
Your employer has a strong commitment to you	16.7	18.3	1.6
I trust my employer to keep me informed about matters affecting my future	19.0	20.4	1.4
Your job security is good	20.1	21.0	0.9
The work environment is safe	24.0	24.6	0.6
It is likely that I would want to join a union if one existed	13.9	14.4	0.5
You can influence your employer’s decisions that affect your job or work life	9.7	10.1	0.4
On an average day, you look forward to doing your work	18.5	18.4	-0.1
I have lacked the necessary tools, etc., to do my job well	4.7	4.4	-0.3
The pay is good	16.2	15.8	-0.4

Source: CPRN-Ekos Changing Employment Relationships Survey, 2000. Paid employees only (n=2118)

Appendix Table 4a. Logistic Regression Results on Likelihood of Being a High Intensity User of Computer Technology – Management Occupations

Management Occupations				
		<u>Standard</u>		
<u>GENDER</u>	<u>Coefficient</u>	<u>Error</u>	<u>Significance</u>	<u>Odds Ratio</u>
Men	Reference group			1.000
Women	-0.520	0.153	0.001	0.594
<u>AGE GROUP</u>				
Less than 30	-0.775	0.214	0.000	0.461
Age 30 to 44	Reference group			1.000
Age 45 to 64	-0.198	0.150	0.187	0.820
Age 65 or older	-3.420	1.900	0.072	0.033
<u>EDUCATION</u>				
Less than high school	-1.123	0.312	0.000	0.325
High school	Reference group			1.000
Certificate or diploma	0.165	0.182	0.367	1.179
University degree	1.141	0.174	0.000	3.131
<u>INDUSTRY</u>				
Professional/Financial Services	1.805	0.219	0.000	6.080
Public Administration	1.646	0.350	0.000	5.186
Education & Information	1.617	0.262	0.000	5.040
Management services, Health, Other	0.311	0.261	0.234	1.364
Accommodation, Food, Trade	Reference group			1.000
Primary, Construction, Manufacturing	0.787	0.182	0.000	2.197
<u>CLASS OF WORKER</u>				
Paid Employee	Reference group			1.000
Self-Employed	-1.085	0.154	0.000	0.338
Constant	-0.507	0.178	0.004	0.602

Source: CPRN-Ekos Changing Employment Relationships Survey, 2000

Appendix Table 4b. Logistic Regression Results on Likelihood of Being a High Intensity User of Computer Technology – Professionals in Business and Science

Professionals in Business & Science				
		Standard		
<u>GENDER</u>	<u>Coefficient</u>	<u>Error</u>	<u>Significance</u>	<u>Odds Ratio</u>
Men	Reference group			1.000
Women	-0.504	0.171	0.003	0.604
<u>AGE GROUP</u>				
Less than 30	-0.334	0.210	0.112	0.716
Age 30 to 44	Reference group			1.000
Age 45 to 64	-0.935	0.189	0.000	0.393
Age 65 or older	-2.695	0.803	0.001	0.068
<u>EDUCATION</u>				
Less than high school	-2.214	0.657	0.001	0.109
High school	Reference group			1.000
Certificate or diploma	0.078	0.233	0.738	1.081
University degree	0.668	0.210	0.001	1.950
<u>INDUSTRY</u>				
Professional/Financial Services	0.824	0.313	0.008	2.280
Public Administration	0.713	0.379	0.060	2.040
Education & Information	0.908	0.435	0.037	2.480
Management services, Health, Other	-0.027	0.424	0.949	0.973
Accommodation, Food, Trade	Reference group			1.000
Primary, Construction, Manufacturing	0.420	0.336	0.212	1.521
<u>CLASS OF WORKER</u>				
Paid Employee	Reference group			1.000
Self-Employed	-0.692	0.210	0.001	0.500
Constant	0.895	0.347	0.010	2.447

Source: CPRN-Ekos Changing Employment Relationships Survey, 2000

Appendix Table 4c. Logistic Regression Results on Likelihood of Being a High Intensity User of Computer Technology – Other Professionals

Professionals - Other				
		Standard		
<u>GENDER</u>	<u>Coefficient</u>	<u>Error</u>	<u>Significance</u>	<u>Odds Ratio</u>
Men	Reference group			1.000
Women	-0.878	0.132	0.000	0.416
<u>AGE GROUP</u>				
Less than 30	-0.032	0.171	0.851	0.968
Age 30 to 44	Reference group			1.000
Age 45 to 64	-0.586	0.143	0.000	0.557
Age 65 or older	-3.402	1.194	0.004	0.033
<u>EDUCATION</u>				
Less than high school	-1.412	1.341	0.293	0.244
High school	Reference group			1.000
Certificate or diploma	-0.036	0.269	0.893	0.965
University degree	0.432	0.219	0.049	1.540
<u>INDUSTRY</u>				
Professional/Financial Services	1.907	0.456	0.000	6.735
Public Administration	1.723	0.474	0.000	5.600
Education & Information	0.504	0.400	0.208	1.655
Management services, Health, Other	-0.163	0.410	0.691	0.850
Accommodation, Food, Trade	Reference group			1.000
Primary, Construction, Manufacturing	0.983	0.620	0.113	2.674
<u>CLASS OF WORKER</u>				
Paid Employee	Reference group			1.000
Self-Employed	-0.367	0.182	0.044	0.693
Constant	-0.551	0.449	0.220	0.576

Source: CPRN-Ekos Changing Employment Relationships Survey, 2000

Appendix Table 4d. Logistic Regression Results on Likelihood of Being a High Intensity User of Computer Technology – Technical Occupations

Technical Occupations				
		Standard		
<u>GENDER</u>	<u>Coefficient</u>	<u>Error</u>	<u>Significance</u>	<u>Odds Ratio</u>
Men	Reference group			1.000
Women	-0.579	0.163	0.000	0.561
<u>AGE GROUP</u>				
Less than 30	-0.227	0.188	0.227	0.797
Age 30 to 44	Reference group			1.000
Age 45 to 64	-0.166	0.186	0.373	0.847
Age 65 or older	-0.991	0.937	0.290	0.371
<u>EDUCATION</u>				
Less than high school	-1.825	0.527	0.001	0.161
High school	Reference group			1.000
Certificate or diploma	0.012	0.201	0.954	1.012
University degree	0.851	0.222	0.000	2.341
<u>INDUSTRY</u>				
Professional/Financial Services	0.932	0.376	0.013	2.541
Public Administration	0.517	0.402	0.198	1.678
Education & Information	0.004	0.380	0.993	1.004
Management services, Health, Other	-0.756	0.378	0.045	0.469
Accommodation, Food, Trade	Reference group			1.000
Primary, Construction, Manufacturing	0.601	0.372	0.106	1.825
<u>CLASS OF WORKER</u>				
Paid Employee	Reference group			1.000
Self-Employed	-0.497	0.231	0.031	0.608
Constant	-0.473	0.364	0.193	0.623

Source: CPRN-Ekos Changing Employment Relationships Survey, 2000

Appendix Table 4e. Logistic Regression Results on Likelihood of Being a High Intensity User of Computer Technology – Clerical Occupations

Clerical Occupations		<u>Standard</u>		
<u>GENDER</u>	<u>Coefficient</u>	<u>Error</u>	<u>Significance</u>	<u>Odds Ratio</u>
Men	Reference group			1.000
Women	0.002	0.115	0.983	1.002
<u>AGE GROUP</u>				
Less than 30	0.046	0.128	0.719	1.047
Age 30 to 44	Reference group			1.000
Age 45 to 64	-0.107	0.114	0.350	0.899
Age 65 or older	-2.460	1.119	0.028	0.085
<u>EDUCATION</u>				
Less than high school	-1.785	0.313	0.000	0.168
High school	Reference group			1.000
Certificate or diploma	0.511	0.113	0.000	1.666
University degree	0.955	0.139	0.000	2.599
<u>INDUSTRY</u>				
Professional/Financial Services	0.900	0.169	0.000	2.461
Public Administration	1.676	0.198	0.000	5.345
Education & Information	1.409	0.202	0.000	4.094
Management services, Health, Other	0.007	0.189	0.972	1.007
Accommodation, Food, Trade	Reference group			1.000
Primary, Construction, Manufacturing	0.296	0.170	0.082	1.345
<u>CLASS OF WORKER</u>				
Paid Employee	Reference group			1.000
Self-Employed	-0.423	0.207	0.041	0.655
Constant	-1.266	0.175	0.000	0.282

Source: CPRN-Ekos Changing Employment Relationships Survey, 2000

Appendix Table 4f. Logistic Regression Results on Likelihood of Being a High Intensity User of Computer Technology – Sales & Service Occupations

Sales & Service Occupations				
		Standard		
<u>GENDER</u>	<u>Coefficient</u>	<u>Error</u>	<u>Significance</u>	<u>Odds Ratio</u>
Men	Reference group			1.000
Women	-0.651	0.130	0.000	0.521
<u>AGE GROUP</u>				
Less than 30	-0.694	0.151	0.000	0.500
Age 30 to 44	Reference group			1.000
Age 45 to 64	-0.665	0.160	0.000	0.514
Age 65 or older	-2.864	1.093	0.009	0.057
<u>EDUCATION</u>				
Less than high school	-2.152	0.399	0.000	0.116
High school	Reference group			1.000
Certificate or diploma	0.190	0.149	0.204	1.209
University degree	1.506	0.157	0.000	4.511
<u>INDUSTRY</u>				
Professional/Financial Services	1.201	0.220	0.000	3.323
Public Administration	0.663	0.226	0.003	1.940
Education & Information	0.861	0.207	0.000	2.364
Management services, Health, Other	-0.627	0.210	0.003	0.534
Accommodation, Food, Trade	Reference group			1.000
Primary, Construction, Manufacturing	1.466	0.198	0.000	4.332
<u>CLASS OF WORKER</u>				
Paid Employee	Reference group			1.000
Self-Employed	0.067	0.191	0.727	1.069
Constant	-1.842	0.151	0.000	0.159

Source: CPRN-Ekos Changing Employment Relationships Survey, 2000

Appendix Table 4g. Logistic Regression Results on Likelihood of Being a High Intensity User of Computer Technology – Blue Collar Occupations

Blue Collar Occupations				
		Standard		
<u>GENDER</u>	<u>Coefficient</u>	<u>Error</u>	<u>Significance</u>	<u>Odds Ratio</u>
Men	Reference group			1.000
Women	-0.154	0.223	0.490	0.857
<u>AGE GROUP</u>				
Less than 30	-0.337	0.207	0.103	0.714
Age 30 to 44	Reference group			1.000
Age 45 to 64	-0.056	0.169	0.739	0.945
Age 65 or older	-5.137	7.275	0.480	0.006
<u>EDUCATION</u>				
Less than high school	-0.999	0.309	0.001	0.368
High school	Reference group			1.000
Certificate or diploma	0.925	0.176	0.000	2.521
University degree	1.805	0.238	0.000	6.077
<u>INDUSTRY</u>				
Professional/Financial Services	0.621	0.797	0.436	1.861
Public Administration	0.412	0.500	0.410	1.510
Education & Information	1.033	0.420	0.014	2.809
Management services, Health, Other	-0.200	0.405	0.622	0.819
Accommodation, Food, Trade	Reference group			1.000
Primary, Construction, Manufacturing	-0.043	0.300	0.887	0.958
<u>CLASS OF WORKER</u>				
Paid Employee	Reference group			1.000
Self-Employed	-0.098	0.203	0.631	0.907
Constant	-2.984	0.319	0.000	0.051

Source: CPRN-Ekos Changing Employment Relationships Survey, 2000

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